THE MODERN HOSPITAL

A Monthly Journal Devoted to the Building, Equipment, and Administration of Hospitals, Sanatoriums, and Allied Institutions, and to Their Medical, Surgical and Nursing Services

Vol. XVI — *June 1921* — No. 6

ST. PAUL'S HOSPITAL, MANILA

BY YORK AND SAWYER, ARCHITECTS, NEW YORK, AND S. S. GOLDWATER, M.D., CONSULTANT, NEW YORK

ABOUT two years ago the writers were authorized by His Grace, the Most Reverend M. J. O'Doherty, Archbishop of Manila, to prepare a set of plans for St. Paul's Hospital. The opportunity to plan a first class hospital for a tropical climate was an unusually attractive one, but the task presented difficulties, owing to the fact that Manila was *terra incognita* to us. It would have been impossible to proceed surefootedly or satisfactorily, if Dr. F. W. Dudley, chief surgeon of the hospital, had not generously come forward with a wealth of information and advice based upon intimate knowledge of conditions in Manila, as well as upon the thoughtful and intelligent consideration of the special requirements of St. Paul's Hospital, in relation to the Sisters, the patients, and the public. We are most grateful to Dr. Dudley for the service that he rendered not only to us, but to the hospital. Through Dr. Dudley we learned many things that it was necessary to know about climatic conditions, the special needs and requirements of the Sisters, local nursing organizations and methods, structural needs, classification of patients, local labor conditions, labor output and probable labor cost, native materials available for building, etc. Indeed, Dr. Dudley was able to place in our hands a complete working program, which Archbishop O'Doherty approved.

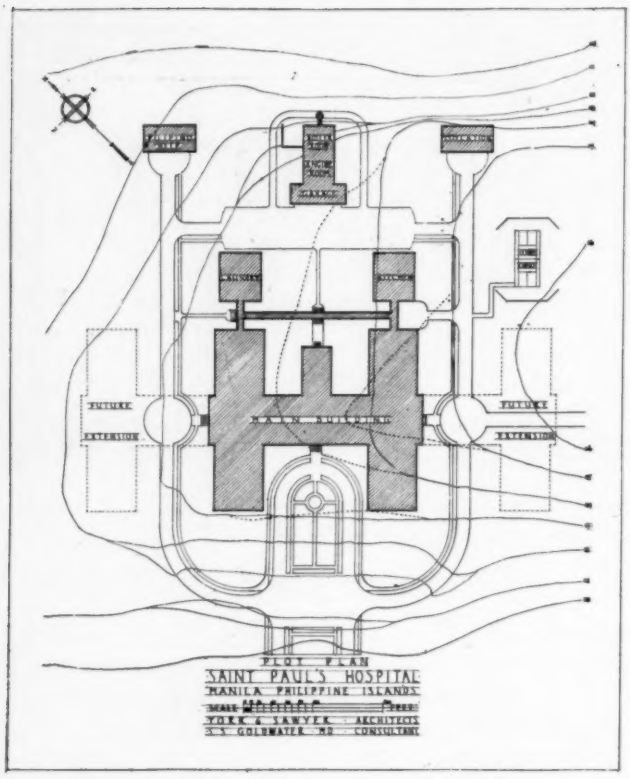
A view of St. Paul's Hospital, Manila, as one approaches from the front

The buildings are about 1,200 feet off the road north of Manila, on the city line, at the crest of a natural watershed and, happily, the site is large enough to permit locating the group of buildings as seemed best in consideration of orientation requirements and topographic conditions.

The buildings face southwest, and are approached by a main drive and a service drive. The main drive is planned with incoming and outgoing traffic separated by an ample parking of green, and lined on either side with native mango trees. At its intersection with the lesser drives, leading to the sides of the group, an open space has been provided for waiting motors. The service road leads to the service court at the rear of the group, and has contact with the kitchen, laundry, garage, power plant, and the main building.

The architectural treatment of the group is the result of a study of local and climatic conditions, plan and interior requirements, rather than an academic architectural project. It is, therefore, simple in detail, logical in fenestration, and pleasantly restful in mass, with cool arched loggias, broad masonry surfaces, tile roofs, and low outlying service buildings. It should perhaps be classed as Spanish Mission, which seems a fortunate coincidence when we consider the architectural traditions of the islands.

The plans show a main building which affords accommodations for 180 patients, a superintendent, thirty-eight nurses, twenty-six Sisters, two interns, and four male employees. A majority of the domestic staff will be housed in a separate



Plot plan of St. Paul's Hospital

building or buildings, of simple native construction. Future extensions to the right and left of the main building will eventually double the capacity of the hospital. Connected with the main building are the laundry and kitchen buildings, each of one story. A centrally located chapel is combined with the main structure. The boiler room, engine room, and garage are combined in a single structure slightly in the rear of and midway between the laundry and kitchen. Financial considerations were chiefly responsible for the temporary omission of an out-patient department.

The character of the soil precluded all excavation for basement or cellar; this brought forward the rather difficult problem of handling all of the domestic traffic on the first floor level. In order to avoid the carriage of food and other supplies through the central corridor, an open, covered corridor was introduced in such wise that supplies may be carried from either the kitchen or laundry to either wing of the main building, without entering the main or central corridor.

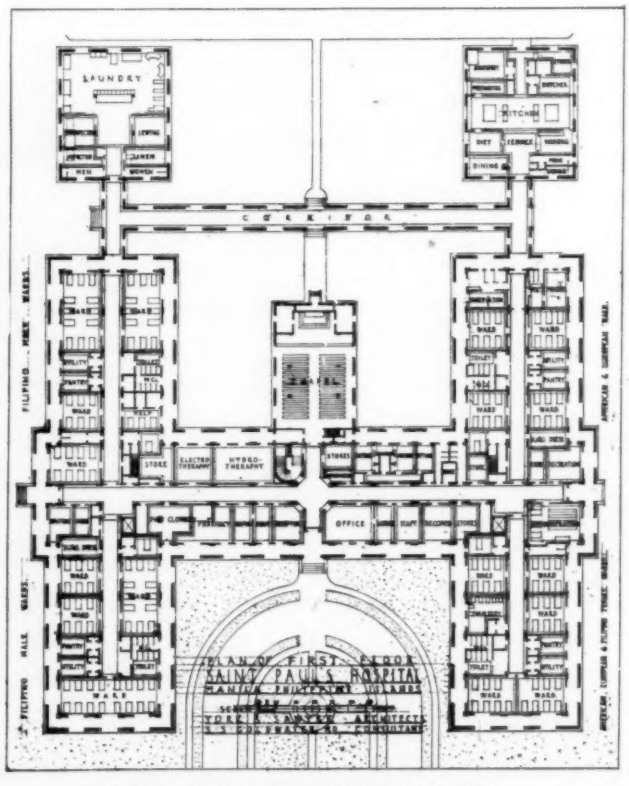
The ward program called for the separation of Filipino patients from Americans and Europeans. On the first floor the entire wing to the left of the main entrance is assigned to Filipino patients; the wing to the right accommodates Filipino and American female patients, and American and European males.

The largest wards contain sixteen beds; a majority of the wards are smaller, the six-bed ward predominating.

The largest ward unit (and by "unit" we mean a group of wards with a single set of service rooms) contains forty-one beds. The service rooms of this group consist of a nurses' station (in the expanded corridor), pantry, utility room, baths, water-closets and surgical dressing room. The nurses' station, pantry, and utility room are located centrally.

The plan, which shows a considerable number of inside beds, not immediately adjoining windows, is one that would not be suitable for a hospital located in other than a tropical climate; but the mean temperature at Manila is about 90 degrees F. and the hospital is practically a fresh-air hospital, with its doors and windows wide open all year. Under such conditions of ventilation, beds may without impropriety be placed in an inside position. In our own country it is customary to seek the sun; in the tropics conditions are reversed, and the sun is deliberately excluded from hospital wards as much as possible. It will be seen that a loggia surrounds the entire hospital, thus throwing all of the wards and private rooms into the shade.

Atmospheric conditions in the tropics demand an unusual ceiling height. Dr. Dudley proposed sixteen feet as a minimum, but expressed a strong preference for twenty feet. The partitions between wards and corridors, at the suggestion of

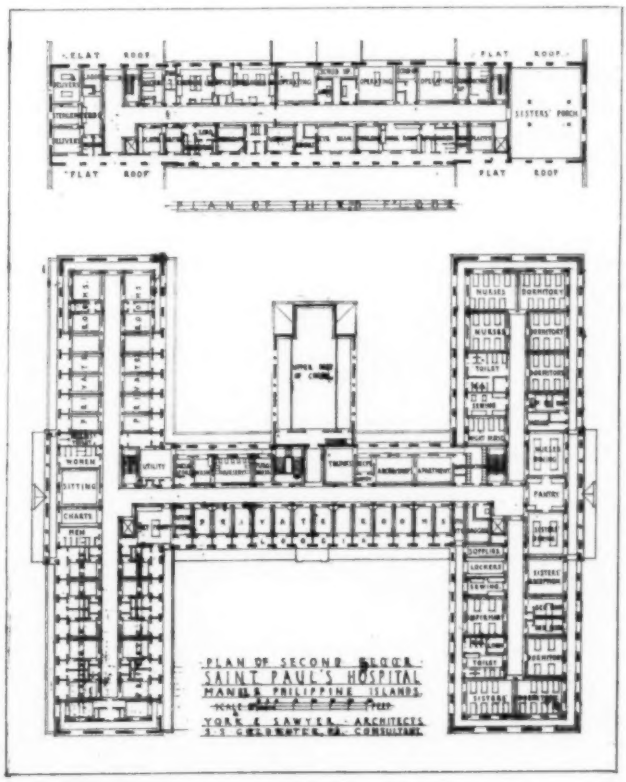


Plan of the first floor, St. Paul's Hospital

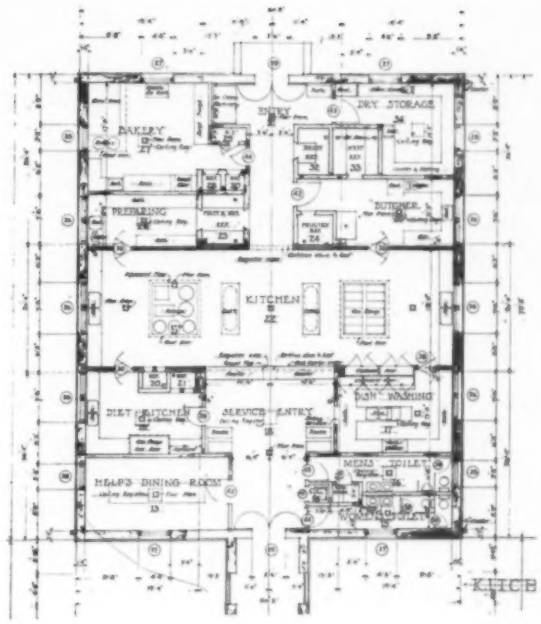
Dr. W. E. Woodbury, who is familiar with the Philippine climate, have been kept clear of the floor, so as to afford a constant circulation of air at the floor level as well as above—a method of construction that would not appeal to building committees in the United States.

The principal entrance to the main building leads directly to a reception room, a business office, and to the chapel. To the left of the main entrance are waiting and examining rooms, pharmacy, the departments of hydrotherapy, thermotherapy, and electrotherapy, and a number of storerooms. To the right, on one side of the corridor, are bedrooms, sitting rooms, and bath for the interns, all connected by a private interior corridor; on the opposite side of the main corridor are the office of the Sister Superior, an office for the staff, and a clinical record room. At the two extremities of the main corridor are two additional entrances, the one at the left affording immediate access to an elevator, serving the private patients on the second floor, the one on the right to the nurses' demonstration room, the nurses' reception room, and a private stairway by which the nurses' and Sisters' quarters are approached.

The kitchen building includes a receiving room, storage space for perishable and non-perishable foods, bakery, main kitchen, diet kitchen, preparation room, scullery, and a dining room for the Filipino help. A one-story covered corridor, open at the sides, connects the kitchen with the main



Plan of the second and third floors, St. Paul's Hospital

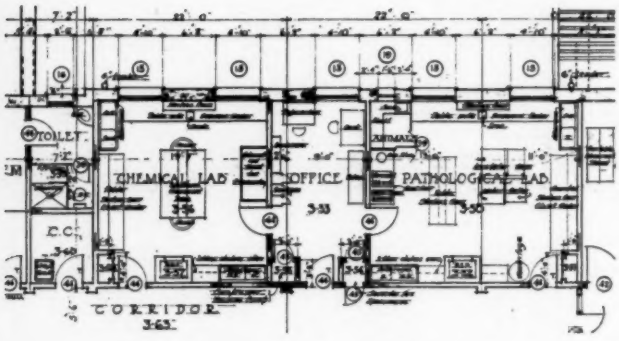


The kitchen and accessory rooms at St. Paul's Hospital

building. Symmetrically opposite the kitchen is the laundry building, in which have been placed, in addition to the laundry proper, a disinfecting plant, a sewing room, linen room, and lockers and toilets for men and women help.

The private rooms, thirty-nine in number, are on the second floor. There are obvious advantages in gathering the private patients on a single floor. A large centrally located utility room, and a fairly spacious diet kitchen serve this entire group. A small number of rooms have private baths and toilets; these rooms have been placed at the extreme ends of the corridor, farthest from the common utility or sink room. Every private room has its loggia. The chart room for the private patients is in close proximity to the elevator and stairway, by which visitors gain access to the second floor, and is at the junction point of the main and side corridors. Adjoining the chart room is a visitors' and convalescents' sitting room. It is expected that some of the private patients will be maternity cases; a crèche has therefore been provided, with washroom and incubator room adjoining.

In the right wing of the second floor are the quarters of the Sisters and nurses. The use of dormitories is prescribed by local custom. It is expected that eventually the Sisters and nurses will occupy a separate building, and the quarters now temporarily assigned to them will then be converted into semi-private wards for American and European patients. Separate dining rooms for Sisters and nurses occupy a central location between the sleeping quarters of these two groups. Between the two dining rooms is a pantry, and



The chemical and pathological laboratories at St. Paul's Hospital

directly opposite, a service elevator. It was at the express request of the Sisters that these dining rooms were placed on the second floor, in the privacy of the Sisters' section, rather than in a more public location on the first floor, adjoining the kitchen. There are separate reception rooms, sewing rooms, and locker rooms for Sisters and nurses.

On the third floor are the general operating rooms, three in number, special operating rooms for head work and plaster work, surgical supply and workrooms, and anesthesia, scrub-up, dressing and instrument rooms. A small consulting room has been placed near the entrance to the operating room. The laboratory suite includes an office and file room, a chemical laboratory, and a pathological laboratory, the whole representing a carefully thought out arrangement suitable for the average 200-bed hospital (teaching hospitals would doubtless require more extensive laboratories). In the x-ray department there are separate rooms for radiography and fluoroscopy, an office, a loading and developing room, dressing rooms, waiting room, and a room for plate storage. For the use of the maternity department there is an isolated suite, including labor and delivery rooms, sterilizing room, scrub-up room, toilet room, locker room, and supply closet.

At the east end of this floor, space has been given over to the Sisters as an outdoor porch. Roofed over and screened in, it will provide shelter from the elements, and will afford ample opportunity for exercise or rest in a quiet, retired place, removed from the public and the general hospital activities.

The roofs of the four two-story wings have been planned with tile surfaces and attachments for awnings, and will provide ample airing spaces for convalescing patients, and give, in front, an excellent view of the city of Manila and the harbor, and in the rear a view overlooking the San Juan River and the rolling, wooded country to the northeast.

The cubical contents of the main building are approximately 2,200,000 feet; the kitchen and laundry combined represent about 335,000 cubic feet. The unusually large cubical contents, compared to the number of beds, may be ascribed to high ceilings (eighteen feet), wide corridors (eleven feet), the spacious chapel, and the fact that the main building is surrounded by loggias.

The hospital is of fireproof construction, except that doors, windows, stairways, and posts will be of wood. For the floors and roof, reinforced concrete beams with concrete slabs have been used. The specifications call for gravel for all concrete. There is to be a continuous foundation wall of reinforced concrete to resist earthquake. The first floor, which is from six inches to three feet above the surface of the ground, is waterproofed with oil. Operating rooms, surgical dressing rooms, and baths are of tile. Terrazzo will be used for the entrance hall, and colored cement for the halls, rooms, and wards.

COMMITTEE TO CHOOSE HOSPITAL SITES ANNOUNCED

A committee of physicians who are to select the sites for the rehabilitation hospitals, for veterans of the World War, which were provided for by recent legislation, has been announced. The members are, Drs. Pearce Bailey, N. Y., Frank Billings, Chicago, Chancellor W. G. Bowman, and Dr. William C. White, Pittsburgh, chairman. The hospitals are to be constructed by the government and operated under the Bureau of War Risk Insurance. More than two hundred applications have been received for the location of the hospitals in various parts of the country. On March 30, and 31, the committee heard representatives from many parts of the country who wished to offer locations for the hospital. Dr. White announces that the committee will consider only government-owned sites or sites which the communities will donate to the government.

The committee will not only choose the location of the hospital, but will decide on the type of buildings to be erected. Twelve million five hundred thousand dollars will be expended for the hospitals. The committee is now conferring in Washington with heads of departments, including the War Risk Bureau, United States Public Health Service, and the Treasury Department.

The committee is occupying quarters of the War Risk Insurance Building and is making a statistical study of the hospital facilities of the various parts of the country with a view to relieving the pressure in the places where the hospitals are overcrowded. All hospitals which are being used for ex-service men are charted and classified. The committee is making recommendations on the enlargement of certain government hospitals.

HOPE TO OPEN SPEEDWAY HOSPITAL THIS SUMMER

New obstacles which have arisen will make it impossible to open the Speedway Army Hospital, Chicago, which has been referred to for some time as nearing completion, until August. A sewage system must be installed, electric current provided, a substantial roof put on the main building, and the hospital turned over to the United States Public Service before it will be ready for occupancy.

METHODS OF OBTAINING MORE NECROPSIES

By CYRUS C. STURGIS, M.D., Resident Physician, the Peter Bent Brigham Hospital, Boston, Mass.

The problem of obtaining more necropsies is one which affects the family of the patient, the progress of the sciences, and society at large. In this article, however, the author does not attempt to discuss the value of necropsies in relation to the advance of the sciences or the good of society as a whole, or to dwell on indirect methods of obtaining more necropsies, such as the education of the public, but to record the methods which have been used, and which have proved successful at the Peter Bent Brigham Hospital. The degree of the success attained is vividly shown by the chart accompanying the article. It is interesting to note that the number seems to be in direct proportion to the energy expended.

ABOUT one year ago it was noticed that the number of patients from the medical service of this hospital, upon whom a necropsy was performed, was becoming progressively less. Though our record has always been fairly good, it was decided that an attempt should be made to improve it, and the few simple measures which were introduced proved to be so successful that it was thought worth while to record them for the benefit of others who were anxious to make a similar attempt in this direction. If there is a sincere interest in the matter on the part of the medical and administrative staffs, and if they are willing to devote a reasonable amount of time and thought to the subject, it is not difficult to obtain permission for a post-mortem examination in 40-45 per cent of the deaths in a hospital. To accomplish an autopsy percentage higher than this one means a somewhat more elaborate effort; though in general the actual number of autopsies seems to be directly proportional to the amount of energy devoted in securing them.

It is not the purpose of this article to discuss the broader aspects of the value of necropsies as related to the advance of medical sciences and society at large, or to dwell on the more indirect methods, such as the education of the public in the value of necropsies, but briefly to record the methods which have been of service to us, and to note the reasons that have been given for refusal of autopsy.

It is a rule in the medical service of this hospital that the senior house officer request permission for a necropsy on each patient dying on his ward. This applies to all patients, whether on the public or private ward, with one exception, and that is when the death may be of a medico-legal nature. In that event the facts are submitted to the medical examiner for a decision, and we are not permitted to ask for an autopsy. The house officer knows that the responsibility of routine requests for necropsies rests entirely with him, and he is instructed to interview the next of kin immediately. The physician in charge of the ward is the logical individual at this hospital to make such a request, inasmuch as he has more intimate contact with the relatives of the patients than other members of the staff. He knows the nearest relative, from whom by law he must obtain permission, and is in constant touch with conditions, so that, immediately following death, the matter can be discussed; or in case the members of the family are not at the hospital, steps can be taken to locate them. As we have found requests by telephone to be very unsatisfactory, we insist that the responsible relative be seen in person, though this may necessitate the house officer making a trip to the residence of the family. In a few instances permission has been obtained by long distance telephone or telegraph, but this was done when it was the only possibility left.

Attitude of Senior House Officer

The senior house officer is instructed to place the matter before the responsible member of the family in a firm, straightforward, but kindly manner, and not in any way to resort to underhanded methods. He explains in simple language just what a necropsy is, and emphasizes that it does not in any way mutilate the body, and it is not apparent at burial that the body has been examined. The house officer should have the attitude that he is not asking permission merely as an accommodation to him, but that the hospital considers postmortem examinations a duty to the members of the family, society at large, and the medical profession. It is explained that the necropsy is done to determine the exact cause of death, and though the diagnosis may be obvious from a clinical standpoint, we are never positive of the exact condition unless the organs are examined in the gross and by the microscope. Furthermore, incidental pathological conditions, such as tumors, healed tuberculosis, syphilis, etc., may be found which would be important for the members of the family to know. In some in-

stances it is well to know if some undiscovered complication has existed which prevented an expected result from some efficient drug, as, for instance, digitalis. The argument that autopsies are of great value to medical science, and hence indirectly to society at large may be used, but in our experience it has not had much weight, except with the more intellectual classes. If it is suspected that the patient has died of some obscure infectious disease, as epidemic encephalitis, it is easy for the relatives to understand that it is necessary from a public health standpoint to establish the correct diagnosis. The relatives are told that the information gained from the autopsy is at their disposal, and arrangements are made at the time to transmit this information to them either by letter or personal interview. The house officer is told that in many instances autopsies are first refused, but this should in no way deter him from presenting further arguments, as frequently a little more persistance enables him to obtain consent. If after a thorough trial, however, he feels that consent cannot be obtained, he is instructed to call the resident physician, who in turn may ask any of the attending staff to assist.

It is our endeavor to obtain a complete autopsy in each instance, and we regard a partial examination as a poor substitute, but if we realize that this is impossible, we attempt, as the last resort and as a compromise measure, to secure an autopsy limited to the region of chief interest. In a few cases we have succeeded in this when met with a flat refusal of a complete examination.

In order to determine the exact percentage of autopsies obtained from month to month, and that the senior house officer may be properly credited for his energy in obtaining permission for necropsies; a careful permanent record is kept of each death by the resident physician, wherein the following facts are tabulated: name of the patient, sex, ward, date, whether or not permission was obtained, and if autopsy was refused, the reason for refusal. A record of this nature, open to inspection by those in the hospital, is an incentive to the house officer to do efficient work to keep his percentage up to the standard, and also in a period of a few years a number of interesting facts concerning reasons for refusal, the percentage of autopsies on public and private ward cases, the number of medico-legal cases, the importance of religious objection, etc., etc., will be accumulated, which will be of considerable value. At the end of the house officer's senior service his autopsy percentage for the entire period is determined, and recorded where it may be compared with the records of former and subsequent house officers. The individual records of the house officers of the medical service of this hospital since the institution of this custom are as follows:

Initials of house officer	Duration of senior service	Individual autopsy record Per cent	Total percentage for the period
L. D.	March 15, 1920, to	69.9	
C. N.	June 15, 1920.	62.5	66.6
D. W.	June 15, 1920, to	66.6	
R. M.	October 15, 1920.	66.6	66.6
E. G.	October 15, 1920, to	67.8	
S. F.	February 15, 1921.	69.2	68.7

The accompanying chart indicates the method of recording graphically the autopsy percentage each month, and serves as a valuable indicator of the success of the house officers in obtaining necropsies. The attempt to obtain more necropsies began March 15, 1920, and as shown on the chart the results were striking and immediate.

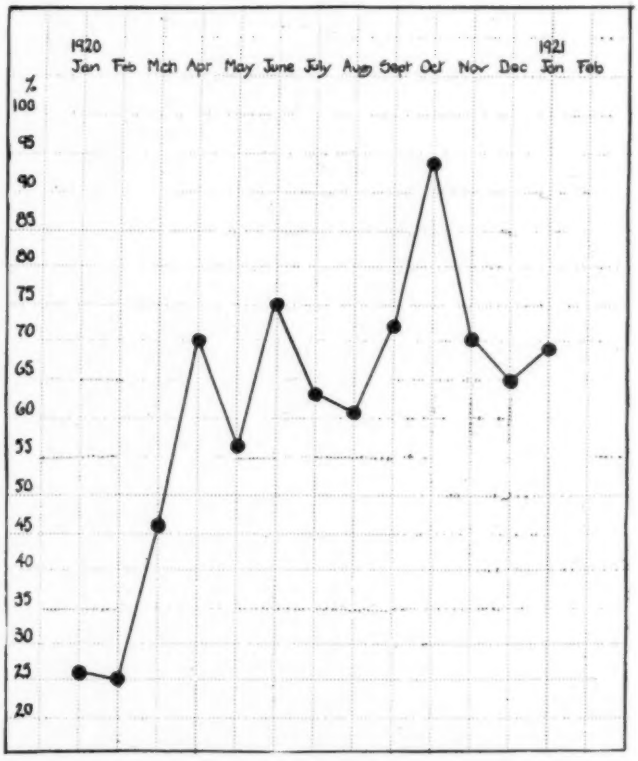


Chart illustrating the percentage of necropsies obtained per month. March 15, we began our efforts to obtain more autopsies. The percentage on the chart for the months of January and February, 1920, do not indicate accurately the usual percentage on the medical service, as for those two months the figures had fallen very low. The autopsy records of previous years are as follows: 1916, 44.4 per cent; 1917, 56.4 per cent; 1918, 37.6 per cent; 1919, 36.8 per cent.

Every endeavor is made to stimulate the medical house officer in charge of the ward to his best efforts, and we insist that he thoroughly acquaint himself with our methods, so that on entering his senior service he will be properly equipped to carry on the work. The resident physician discusses with him the arguments used and the

methods of presenting the request to the relatives. Likewise he is instructed that it is essential to secure the signature of the nearest relative, and he is warned that the one granting consent must understand what is being signed. He is urged to read articles dealing with the values of necropsies to stimulate his enthusiasm,[1][2][3][4] and during his junior house officer service, is trained by being present when his senior seeks permission for autopsies.

A study of the reasons for refusal of autopsy over a period of a year, reveals that by far the largest number were refused for "sentimental reasons." There is of course no argument that one can advance to meet this; all that can be done in an endeavor to overcome this objection is to point out the logical reasons for doing autopsies. One may call attention to the fact that there should be no more sentiment concerning a necropsy than there is about embalming, or as far as that is concerned, cremating or burying a body. It is rather surprising to note that in a number of instances when a physician, trained nurse, or a minister was a member of a family, autopsy has been refused on these grounds. It is somewhat difficult to explain why these three groups, from whom one expects cooperation, should react in such a manner. Perhaps this has been merely a coincidence, as the number of cases where this relationship existed has been rather small, but it will be interesting to note its influence in future records.

The next most common reason given for refusal of autopsy is the statement that it is against the Jewish religion, and in our experience it has been exceedingly difficult to obtain autopsies from Hebrews. As nearly as one can ascertain, the statement that an autopsy is against their religion is not essentially true, though opinions seem to differ on this matter. We have been able to obtain a few autopsies on Jewish patients, and the fact that in one of the largest Hebrew hospitals in this country the autopsy record reached 50 per cent for a time, indicates that autopsies on Hebrews are obtainable, and one should not hesitate in attempting to secure them.

In a few instances autopsies have been lost through the influence of the undertaker, and it is important for the hospital to secure his cooperation, and not incur his enmity, for in many families, particularly among the poorer classes, council is frequently sought from the undertaker as to the advisability of an autopsy. The least a hospital can do, as far as undertakers are concerned, is to see that vessels are tied properly, so embalming may be done without difficulty, and that the body is made ready for delivery as promptly as possible. It is our custom to ask the relatives, at the time permission for the autopsy is secured, when they wish the body delivered, and if this is determined, to specify the exact time on the permission blank. In case the time of delivery has not been determined, the relatives are asked to have the undertaker telephone the hospital before calling, and in this way avoid delay.

There are many other points to be learned by experience which will assist in placing the matter before the relatives in the most satisfactory manner, but after all the most essential requirement is a real desire for necropsies on the part of physicians, and a willingness on their part to devote a reasonable amount of time to interviewing friends and relatives. It is amazing to note the low ratio of autopsies to the total number of deaths in most hospitals in this country, yet every physician realizes their importance to the advancement of medicine, and their value in raising the standard of medical practice. There are only a few hospitals with an autopsy percentage over 50 per cent, and recently in an editorial in the *Journal of the American Medical Association*, there appears a statement that the Chicago Academy of Medicine found that the autopsy percentages in the hospitals of that city varied anywhere from 48 per cent to none at all in nine institutions. There is no real reason why such a condition should exist if there is a genuine desire on the part of the staff of any hospital to correct it. Postmortem examinations may be obtained on 30-50 per cent of all deaths with no other measure than the mere asking for them. The aim should not be, however, at such a low percentage but a routine autopsy on each death should be the mark, and that this is not altogether an impossibility is evidenced by the fact that at the Mayo Clinic in 1915, autopsies were performed on 95 per cent of all deaths. It is impossible to tell but that the most obvious and ordinary clinical diagnosis may be the most interesting and instructive necropsy, and if necropsies are limited to only the apparently interesting cases much of importance will be missed. The entire matter of necropsies is of such fundamental importance to the medical profession that it warrants the serious consideration and closest cooperation of the entire staff of the hospital, both professional and administrative. Under such conditions the solution of the problem would present no great difficulties.

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2. Castlelaw, Rush E.: The Superintendent's Responsibility for Obtaining Post Mortems, THE MODERN HOSPITAL, 13:182 (Sept.) 1919.
3. Wilson, Louis B.: The Necropsy as a Public Service, J. A. M. A., 50:1784 (June 7) 1913. Also in Collected Papers of the Mayo Clinic, Philadelphia and London, W. B. Saunders Company, 1916, VII, 937.
4. Winternitz, Milton C.: Necropsies—Their Method of Obtaining and Protection of the Hospital, THE MODERN HOSPITAL, 8:36 (Jan.) 1917.
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THE NURSES' HOME AT HACKLEY HOSPITAL, MUSKEGON, MICH.

By GRACE D. McELDERRY, R.N., Superintendent of Hackley Hospital, Muskegon, Mich.

DURING the summer of 1917, the trustees of Hackley Hospital decided to erect a nurses' home that would provide for fifty student nurses and eight officers. Building material had already made considerable advance in cost but in the light of the great increase since 1917, the decision to build then has proven its wisdom.

The new home was erected on the spacious grounds consisting of four large city blocks, surrounding the hospital building, which is centrally located.

The architecture of the home conforms in a general way to that of the hospital building. It is built of red brick with Bedford stone trimming,

A front view of the Hackley Home for Nurses.

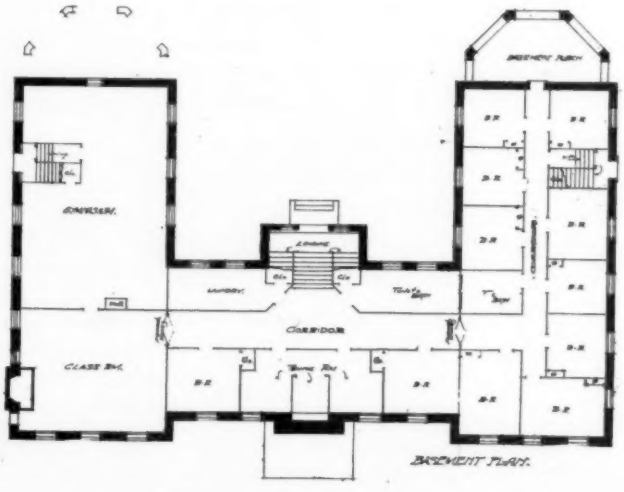
and is of practically fireproof construction. The floors and stairways are reinforced concrete poured on metal forms. In all the rooms of the building the floors are white oak laid on the concrete, while the stairs and corridors are covered with composition corkstone, the base and cove black and the middle portion tan. This makes a very attractive flooring.

The building has a 120-foot frontage and is seventy-two feet deep, with an open court in the rear formed by extensions of thirty-six foot wings. Opening off the wings at the rear of the building on both floors are large porches, screened in summer and enclosed with glass in winter. These four porches provide two sleeping porches and two living porches, one of each kind for the supervisors, and for the student nurses.

The front entrance of the home is colonial in design, two large columns support a small balcony opening off the second floor. On entering the door, there are four steps leading up to an octagonal lobby. Directly in front, the broad stairway leading to the second floor and the landing half way up the stairs, with attractively curtained windows, give a very pleasing impression of the home as one enters. From each side of the lobby eight-foot corridors lead to the wings of the building. To the right as you enter the lobby is a small, cozily furnished living room for the matron, or the house mother, as we prefer to think of her, with her bedroom adjoining. In this wing on the first floor are also to be found rooms for six supervisors, and a suite of rooms for the principal of the training school. These rooms are well furnished, comfortable, and homelike.

On the left of the lobby are large reception and living rooms. The reception room first entered has brown mahogany chairs and davenport, with cane backs and blue velour cushions. The rugs of both rooms are alike, and are soft shades of blue, French gray, and rose, intermingled in a beautiful Japanese design. From the reception room double French doors open into the living room so that the two rooms may be used as one. The furniture of the living room is also brown mahogany but there is also an over-stuffed tapestry couch with two large chairs to match. At the far end of the room a large fireplace adds to the general impression of homelike comfort and beauty. A beautiful baby grand piano, the gift of the staff physicians and the board of trustees, provides much real enjoyment for the nurses. A victrola also adds pleasure to their hours off duty.

At the end of the corridor near the living room



Basement floor plan of the Hackley Home for Nurses.

is a small kitchenette containing an electric range, sink, cupboard and refrigerator, and next to it is a small dining room.

The main dining room for the nurses is in the hospital building so the little kitchenette and dining room are merely for Sunday morning breakfasts for the nurses off duty, and for convenience in serving refreshments when guests are entertained. On this floor are also located a large linen closet and a maids' closet.

Each floor of the home has two large bath and toilet rooms containing two tubs, two toilets, eight lavatories, and one dental lavatory. This arrangement simplifies the plumbing, as the bath rooms on the second floor are over those on the first floor and in the basement. Each floor also has a drinking fountain in the corridor near the stairway.

The second floor contains a sewing room at the head of the stairway over the entry; the other rooms are all single and double rooms for the nurses, except the night nurses' dormitory which is at the end of one wing and opens out onto the sleeping porch. This arrangement provides a quiet, airy, well ventilated sleeping room for the night nurses.

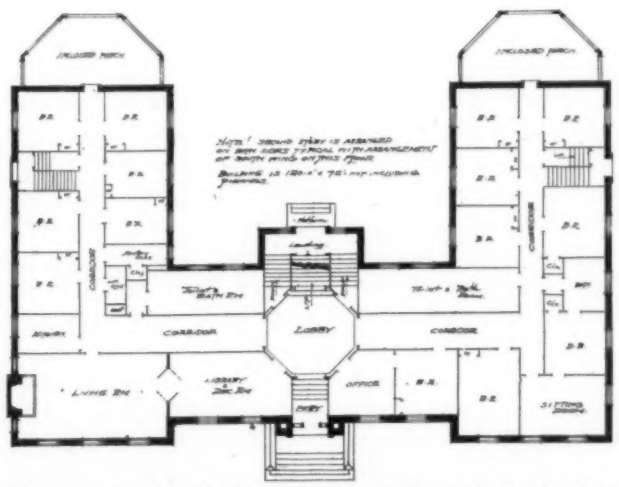
The living room has this attractive fireplace, with comfortable chairs before it.

The reception room is connected with the living room by double French doors, the furniture and upholstery in the two rooms harmonize artistically.

In each room are two lights, one by the dresser, the other over the study table. Each room contains a closet of the wardrobe type with hangers for garments, and a shelf above for hats.

There are three stairways, the main stairway in the lobby and one in each wing. The basement, which is only underground two feet, contains accommodations for the maids in one wing, which is separated from the rest of the basement by French doors. It contains single and double rooms, a living room, and a large toilet room. These rooms in the basement are as light as the rooms on the first or second floor.

A large trunk room, and a laundry containing three stationary tubs and an electric iron, have been included for the nurses.



First floor plan, typical of second story arrangement, Hackley Home for Nurses.

A well lighted class room, thirty by twenty-four feet, has been carefully planned and equipped with everything necessary for thorough instruction, as well as blackboards, cupboards, and drawers for articles used in demonstration.

Perhaps the room which gives most pleasure to the nurses is a large gymnasium, thirty by forty-five feet. A finished floor is laid in this room so that dances may be held here.

In the planning of the whole building the comfort of the nurses was the first consideration. Every care has been exercised to make it homelike and to provide it with equipment that will attract the nurses and keep them satisfied in their home life.

The grounds around the home provide ample space for croquet and tennis courts.

The new home is lighted and heated from the hospital plant, the steam being sent across in an underground conduit.

ORGANIZING A MODERN HOSPITAL LABORATORY

By O. J. WALKER, M.D., Director of the Laboratories of the Youngstown Hospital, Youngstown, Ohio

ONLY recently has the laboratory been recognized as an important and indispensable department of an efficient hospital organization. The laboratory of even our larger urban hospitals (the university teaching hospitals are excepted throughout this discussion) of not so many years ago, very frequently consisted of some dark cubby-hole in the attic or basement, where urines were examined for albumen and sugar, and perhaps an occasional blood count was performed. The work was usually delegated to an intern or some young physician just starting in active practice, and in consequence, laboratory methods were usually a secondary consideration.

"Only within the last decade have hospital authorities and the medical profession awakened to the wonderful possibilities of a fully equipped and properly functioning hospital laboratory. Former complicated and tedious procedures have been simplified and shortened; . . . while our knowledge of the significance and clinical application of bacteriology, serology, chemistry, hematology, and metabolism in disease, has been enormously broadened and enlightened. . . . Even the laity have awakened to the fact that the intelligent diagnosis and treatment of disease is no longer dependent solely upon analysis and deductions from objective and subjective signs, but is becoming an exact science."

Only within the last decade have hospital authorities and the medical profession awakened to the wonderful possibilities of a fully equipped and properly functioning hospital laboratory. Former complicated and tedious procedures have been simplified and shortened; newer, more delicate scientific apparatus has been devised; while our knowledge of the significance and clinical application of bacteriology, serology, chemistry, hematology and metabolism in disease, has been enormously broadened and enlightened. The researches of Folin, Henderson, Flexner, VanSlyke, the Benedicts, and a host of others will be recorded as epoch making in the history of the hospital laboratory. The campaign of publicity and education, instituted recently by the American College of Surgeons, has been no small factor in stimulating interest in the clinical laboratory. The late war, with its intense postgraduate training of thousands of physicians, bringing them in contact with large hospital organizations where every kind of laboratory facility was available to assist them in diagnosis and treatment, has done much to create a demand for better laboratories in our civilian hospitals. Even the laity have awakened to the fact that the intelligent diagnosis and treatment of disease is no longer dependent solely upon analysis, and deductions from objective and subjective signs, however valuable they may be, but is more and more becoming an exact science.

In order to meet such demands, hospitals, large and small, have developed the so-called "clinical laboratory." Groups of physicians not having hospital affiliations have founded their own laboratories, or have patronized the "commercial" laboratory. Some hospitals have expanded their laboratory facilities to accommodate all the medical profession in the community who desire to use them. Truly, ways and means of satisfying the demands for clinical laboratory services have been numerous, and variable is the attendant success achieved. However, it is not within the scope of this paper to discuss this phase of the subject.

Hospital Laboratory Activities

What constitutes an efficient hospital laboratory organization? Fundamentally, such a laboratory forms a unit in an institution whose only reasonable justification for existence is the service that it renders to the sick and suffering of the community. Therefore, the laboratory can qualify as an effectual department in the institution of which it forms a part, only as it succeeds in rendering a full measure of the particular kind of service which is demanded of it by the hospital and the community.

What, then, are the services which a hospital can require of its laboratory? Only as we have these definitely in mind can we intelligently direct the activities of the laboratory. Primarily, a clinical laboratory should provide all those scientific laboratory procedures of proven worth, for the assistance of the physician in the diagnosis, prognosis, and the treatment of the disease. Secondarily, the laboratory activities should include the public health work of the hospital, the instruction of the nurses, technicians, interns, and the physicians of the community, in the laboratory methods and their clinical significance; and lastly, every laboratory should lend its facilities to the solution of some of the manifold problems which daily confront the medical man in his fight with disease.

The laboratory procedures which are of valuable assistance in the diagnosis, prognosis, and treatment of disease are many, and every year their number increases. The development along this line has been no less phenomenal during the past few years. Methods that were not known half a decade ago, or at the most were only mentioned to the medical student of five years past, are daily routine in the modern laboratory. These tests include the sciences of pathology, bacteriology, serology, immunology, hematology, chemistry, and metabolism.

Value of Postmortems Recognized

The value of postmortem examinations has long been recognized for the light it throws on disease phenomena, and for its check upon diagnosis. The average hospital too often slights this important field. *As the percentage of autopsies in an institution rises the percentage of undiagnosed death falls, and the quality of the service rendered by the medical staff improves.* The corollary of this statement is that as the percentage of postmortems in an institution increases the mortality in that institution decreases.

A gross and microscopic description, together with a pathological diagnosis by a competent pathologist, of all surgical tissues, is routine in all hospitals which deserve the name. Not only is this a very essential part of the record of an operation, of value to the hospital from a medico-legal standpoint, but it is of infinite value to the surgeon in determining the correctness of his diagnosis and operative procedure, in the intelligent postoperative treatment of the case, and in the critical study and compilation of statistics of similar cases.

Although the examination of frozen sections of fresh tissues at the time of operation has a limited field of usefulness, yet the value of this procedure in avoiding unnecessary, radical, mutilating operations in nonmalignant cases is unquestioned, and the method deserves more universal application than it at present enjoys.

That the laity are awake to the importance of necropsies and routine surgical tissue examination is becoming more and more apparent from the frequent requests for private autopsies, and reports on tissues removed at operation.

The examination of tissues, fluids, and secretions, normal and pathological, for disease organism, has an importance which is so universally recognized as to need mentioning here only for the sake of completeness. Yet it is surprising in view of the statement just made how little utilized are the available methods for the specific diagnosis and intelligent combating of infectious diseases. Aside from throat swabs in diphtheria and smears in gonorrhea and tuberculosis, the several score of other equally valuable procedures are only occasionally called for in the average hospital. Blood culture in diseases in which a bacteriemia is usually associated, pneumococcus typing in pneumonia, examination of the cerebrospinal fluid in acute forms of meningitis, dark field examination of venereal sores, examination of throats, urine, and feces for "carriers," are only a few of the many procedures that should be performed daily in any fair sized institution for the care of the sick.

With the advent of serological methods the diagnosis and treatment of syphilis has undergone a change, so that today no one attempts to deal with this disease without the Wassermann test. Tuberculosis, gonorrhea, pneumonia, dysentery, typhoid, and many other conditions are manifest in a more or less specific way by one form or another of serologic test which is simple of performance in a well equipped laboratory. Immunologic procedures are so closely associated with bacteriology and serology that the laboratory has seemed the natural medium for their development and performance. So the preparation of autogenous vaccines, diagnosis and treatment of protein sensitization in hay fever, asthma, and allied conditions, administration of anti-sera and prophylactic vaccines are a part of the function of every well equipped laboratory.

The examination of blood by physical as well as chemical, bacteriological, and serological methods has become a science in itself. Such is the recognized importance of blood examinations that the so-called "complete blood" (including the examination of the red and white cells, a determination of the relative percentage of the various kinds of leukocytes, and the determination of the hemoglobin percentage) has become a routine procedure in many hospitals. Surely the diagnosis of most operative cases is incomplete without a leukocyte count, and the differential percentage, together with a coagulation time of the blood. The determination of the coagulation time of the blood has become a routine with most conscientious nose and throat men. Compatibility tests between donor and recipient are an essential preliminary to blood transfusion and skin grafting. Thus we might continue naming several score of blood tests that have a recognized utility.

Era of Expansion of Chemical Knowledge

At the present time we are in the midst of a great era of expansion of chemical knowledge as applied to medicine. It can only be likened to the previously occurring rapid development of bacteriology, when its possibilities became clearly recognized. The contributions in protein chem-

istry and the newer knowledge attained in metabolism and functional pathology emphasize the truth of this assertion. Chemical methods of investigation, formerly too complicated and time consuming for practical application have been simplified and shortened without sacrificing accuracy, until we have many new and valuable tests suited to clinical application. Newly introduced biochemical methods are becoming ever increasingly such direct aids to clinical diagnosis and treatment, that of the total clinical laboratory examinations a large percentage are already chemical. The newer methods for the quantitative determination of various constituents of the blood, urine, and other fluids may be here mentioned as an example. Nephritis, diabetes, and acidosis are only a few of the many conditions that require examination by chemical methods as a most important part of their rational management.

The determination of the basal metabolic rate, or the basal heat production of the body, has only recently been simplified so as to come within the realm of the clinical laboratory. For several years this procedure has been of recognized value in the study of certain disturbances of the ductless glands and in blood dyscrasias. The addition of this procedure to the laboratory armamentarium opens up another interesting and promising field in the domain of clinical medicine.

What might be designated the "public health work" of the hospital is a very important activity of the hospital laboratory. The director of the laboratory might be termed the chief sanitary officer of the institution, for the questions naturally referred to him of this nature are those with which such an officer has to deal. Some of the duties for which the laboratory should be responsible in this respect are the regular examination of the milk and water supply of the hospital, a regular bacteriologic examination of the operating room technic, examination of the culinary department personnel for the presence of communicable disease, and the prophylactic vaccination of employees against infectious diseases to which they are constantly in danger of exposure. These are only a few of the many duties which fall to the laboratory department in this field.

Educational Activities

Every complete hospital organization has its nurses' training school, and the laboratory sciences are a part of every standard training school curriculum. It is only natural to turn to the laboratory personnel for instructors, and to the laboratory material for the practical demonstrations and practice in these studies. Hearty cooperation in this respect is a conscientious duty of the laboratory.

The laboratory must assume its share of the intern instruction. The average intern, bent on a purely surgical or clinical career, frequently finds that side of medicine so engrossing that he loses sight of the present and growing importance of laboratory procedures, particularly their significance and relation to history and physical findings. The laboratory must help the intern to see the importance of a well rounded medical education, and contribute its share in helping him to obtain it.

New Field for Non-Medical Technician

The remarkably rapid development of the clinical laboratory within the last few years, coupled with the lack of a sufficient number of medically trained men to do the work, has created a new field of endeavor for the non-medical technician. Under medical guidance, the services of non-medical technicians are quite satisfactory, dependent, however, upon their training and temperament. The army, during the late war, trained many technicians, and several undergraduate and postgraduate medical schools now offer courses of training to non-medical laboratory workers; but still the demand for reliable, thoroughly trained and competent technicians far exceeds the supply. Obviously, until conditions change, each laboratory should assume its share of the training of this highly technical branch of medical specialism. The very nature of the work is such that the training must always be one largely concerned with practice. Theoretical knowledge is essential and can be obtained through lectures or reading, but the technical skill required in the performance of most laboratory tests can only be acquired by repeating the technic many, many times. Where else, if not in the laboratory, can this practical training be obtained? Gradwohl's[1] recent suggestions for training schools for laboratory technicians, with a "laboratory examining board," before which all graduate technicians should qualify, are timely and well taken. Such training must, however, for the reasons stated, follow the plan of schools of technology, of giving students an opportunity to obtain the desired mechanical skill by actual work in the "shops" that are doing daily practical work.

It was remarked previously in this paper that a large percentage of the total tests now performed daily in any well organized laboratory were not taught, or at best only casually mentioned, in the medical curriculum of half a decade

1. J. A. M. A., Jan. 8, 1921, p. 127.

past. New methods and broader application of laboratory examinations in diagnosis, prognosis, and treatment of disease are being constantly developed in all branches of the laboratory sciences. The practitioner can scarcely be censured for not being able to keep up with the race. The scope of medical science is becoming so broad that no one can hope to adequately and efficiently cover the whole field. The laboratory must therefore point the way to the clinical application and the correlation of these newer methods with symptoms and physical findings in disease.

Original Research

Research in the average hospital laboratory outside of the university circles is handicapped for want of funds. Of clinical material there is usually an abundance, but unless some member of the laboratory staff can be assigned time for uninterrupted experimentation and meditation over his problem, original research is a slow and very discouraging proposition. However, analysis of accumulated data on series of cases observed in a routine way, or trying out new methods to determine their value, can be constantly carried on as a part of the laboratory work.

The position of the laboratory with respect to other departments of the hospital is one entirely too reciprocal to bear isolation or an independent sphere of activity. The closest cooperation with every department, nursing, clerical, culinary, housekeeping, engineering, and purchasing, is essential to the highest type of service.

Laboratory Equipment

The physical equipment and personnel of the hospital laboratory of the present day is largely dependent on the progressiveness of the institution, and the professional demands of the medical staff.

The foundations on which the physical equipment of a complete laboratory must be built are fundamentally those necessary in laboratories of chemistry, bacteriology, pathology, serology, and hematology. Glassware, apparatus, and reagents in sufficient quantities are necessary to uninterrupted and efficient work. As accessories to these departments, necropsy room, museum, library, office, examining room, animal quarters, metabolism ward, preparation room, and stock room are necessary. All the departments, with the exception of the metabolism unit and necropsy room, under stress of dire necessity, can be alloted to different parts of one or two large rooms. Ideally, all of these departments are placed in separate adjoining rooms. There are numerous reasons why the highest degree of efficiency can only be attained in this way. In planning any laboratory, plant systemization, so as to conserve the time and energies of the workers, is an important detail. Duplication of apparatus is economical when it saves steps for the worker. When possible, the supplies and reagents for any given test or set of tests should be so placed that one can have everything for that test within hand's reach. Stock reagents and chemicals should be kept constantly on the shelves, so that no tests need be held up for want of these supplies.

Provision for a working library, even if necessarily very restricted in size, should be made in any complete laboratory development. The laboratory field of knowledge is developing with such giant strides that it is necessary to keep constantly in touch with numerous scientific journals if one's institution is to keep up with the times.

Very few hospital libraries are in any way adequate to the calls made upon them by the laboratory. The reason often given in explanation of such a deficit in ready-to-hand knowledge is that such books are too expensive to acquire. As a matter of fact, a small outlay yearly, judiciously invested by a competent authority, suffices to obtain a very useful working set of journals and text books which, if properly preserved and supplemented every year, will in a surprisingly short time develop into a most valuable reference library.

Metabolism studies are assuming more and more importance in the proper scientific study of disease. As a matter of common experience, it is very difficult to properly carry out metabolic studies in the midst of an active medical ward. Segregation of patients undergoing studies, as well as their complete control, is essential for the proper conduct of such work. Specially trained nurses or technicians are also essential to the best results. For most requirements, two small rooms for male and female patients, with a conveniently situated diet kitchen, are adequate. The location of this unit should, if possible, be directly adjacent to the chemical laboratory.

Importance of Proper Reports

Reports are not an unimportant phase of a laboratory organization. The character and promptness with which reports are sent out from the laboratory is frequently one of the chief points upon which the efficiency of the laboratory is judged. Uniform report forms are indispensable. Reports should preferably be typewritten or at least legibly written in ink. They should be numbered serially and be made out in duplicate, one copy going to the patient's record, and the other being filed away in the laboratory as part of the permanent laboratory records. These latter should be indexed as to patients' names, doctors,

diseases, and tissues. It is surprising how often one refers to his report files as an aid to the physician or for statistical data.

The laboratory personnel may be divided into professional, technical, clerical, and unskilled labor. The numerical size of such a personnel will vary with the size of the hospital. In the large, well equipped and financially assured hospital, it may be a director, with medical or at least non-medical technical assistants, in each of the departments of chemistry, pathology, bacteriology, serology, and metabolism, and with adequate technical and non-skilled labor in each, together with sufficient clerical help to prepare reports, file and index records, and otherwise care for the office duties; or perhaps in the small, financially struggling institutions it may be a single full time medical man with one or more technicians. *Not a few small hospitals are attempting to get along with a non-medical technician, often inadequately trained, in charge of their laboratory; but lacking the guiding influence of a properly trained medical man with special laboratory training, this plan, is, if anything, worse than no laboratory at all.* It results in a lot of poor, inaccurate examinations which in the end only tend to discredit laboratory work, and obstruct the deserved progress of this most useful department of the hospital.

The Laboratory Director

The director of the hospital laboratory, if he is to make his department measure up to its fullest efficiency, must, in addition to being a medical man, be an administrator, critic, and teacher. The laboratory chief is usually chosen because he is preeminently a pathologist, bacteriologist, serologist, or chemist, and as a result his particular specialty is often the one most emphasized in his organization, and a lop-sided laboratory is the result. The ideal head of a laboratory is well grounded in all the laboratory sciences as they are related to medicine, so that he views them all with an impartial eye and endeavors to correlate each and every one with clinical medicine. He is a specialist whom the clinician calls in consultation in cases where laboratory help is needed. He is a voracious reader, covering the extensive literature pertaining to his specialty. He views all new laboratory procedures with a critical eye, separating the chaff from the grain, and incorporating that which is good in the laboratory armamentarium. He has imagination to visualize and devise new methods, and attack original problems as they arise. He is a teacher, instructing those under him and those about him in laboratory technic, the significance of results, and their interpretation in the light of clinical findings.

The laboratory is drawing to it some of the best minds in medicine today, but if they are to remain in the work the remuneration for this special kind of service should be at least equal to that of other special branches of medicine. The present scarcity of medically trained laboratory men is in no small measure due to the starvation salaries paid for this highly specialized type of service, which, with the special training required and services rendered, ought to pay as well as the practice of the average high class practitioner.

When communities, hospitals, and the medical profession as a whole fully realize the necessity for a laboratory service such as is set forth in this article, we will see such an advance in the practice of medicine and in the care of the sick as will tend largely to reduce the number of chronically ill.

HOTEL RESERVATIONS AT WEST BADEN SHOULD BE MADE EARLY

The American Hospital Association is looking forward to an especially pleasant conference this year, in the matter of living conditions, as it is quite probable that all the members will be housed in one hotel, and that they will have the hotel practically to themselves. The West Baden Springs Hotel has assured accommodations for members and delegates to practically the full extent of its capacity, the contract providing that a minimum of seven hundred attending the conference will be housed there, and the full capacity of the hotel being open to advance reservations by the members. Guests of the hotel cannot be refused, however, if they make advance application for unreserved space in excess of the seven hundred rooms. Therefore, you should make sure of your reservation by writing for it immediately.

All the rooms are large so that more than one person can comfortably occupy a room, in this way taking advantage of the reduction in rate. The rates of the West Baden Springs Hotel, the headquarters of the convention, are as follows:

AMERICAN PLAN—PER DAY

Without Bath	Single	Double
Rooms Facing Atrium, Hot and Cold Water Only	$ 7.00	$13.00
Rooms Facing Atrium, Toilet, Hot and Cold Water	8.00	15.00
Outside Rooms, Toilet, Hot and Cold Water	9.00	17.00
Outside Rooms, Toilet, Hot and Cold Water, Specially Appointed	9.50	18.00
With Bath		
Rooms Facing Atrium	9.00	17.00
Outside Rooms	9.50	18.00
Outside Rooms, Specially Appointed	10.50	20.00
Tower De Luxe Rooms, en Suite	11.00 per person	

PUBLIC HEALTH SERVICE WANTS INFORMATION ON X-RAY FACILITIES

The x-ray section of the office of the Surgeon General of the U. S. Public Health Service recently sent out a questionnaire asking for information concerning the x-ray facilities available at the various hospitals and other institutions, where persons coming under the care of this Bureau, are at present, or might be in the future hospitalized. The questionnaire covered such points as: the electrical conditions, type of current, number of volts, phase, etc.; equipment, make and size of machine, if the institution owned one; type of disease for the study of which the equipment is adapted; the floor space of the department, and any other pertinent information.

WASHING THE HOSPITAL'S FLAT WORK*

By WALTER TRIMBLE, Chicago, Ill.

PRIMARILY, a hospital's flat work is washed to put it into a sanitary condition, but the aesthetic sense demands more than mere sanitation. The goods could be completely sterilized and still present a soiled appearance because of grayness or yellowness, and thus offend the eye, and even the sense of smell. The mass of the people, however, knowing little of sanitation, and caring less, put the aesthetic side first, demanding snow-white linen, with little thought of lurking microbes.

Hence, as the hospital is a public institution, it must meet the public demand for snow-white linen, and in meeting this demand it is put to more than a little trouble and expense. If nothing but the removal of the loose dirt and the complete sterilization of the fabrics were required, the laundry's task would be very simple. All that would have to be done would be to give the articles a ten-minute lukewarm bath of washing soda and water, a twenty-minute cold rinse, at about 180° F., and a five-minute cold rinse. This would answer the purpose, because the first bath would remove all albuminous substances, the second would kill the germs, and the third would cool off the goods so the pieces could be handled.

SECTION OF WASHROOM.

This view shows one side of the washroom of the laundry of the Dix Hill State Hospital, at Raleigh, N. C. At the left are two sterilizing washers and an extractor, and at the rear is a high-pressure sterilizer, which is a machine for washing contagiously infected goods.

But our aesthetic senses demand more than this—a great deal more. And therein rest the difficulties of the washing process, not only with flat work, but with all other white goods. Most of the hospital's washables are white goods, and these not only must be clean from a bacteriological standpoint, but they also must present a snow-white appearance to the eye, and this whiteness must be attained with a minimum amount of damage to the fabrics.

To make discolored goods white is a very simple matter, but to make the fabrics white without doing damage to the fiber is by no means easy. It is a comparatively simple matter to avoid mechanical damage to the fabrics in the washing process, but skill and care must be exercised in order to avoid chemical damage to the fibers of which the fabrics are made.

In addition to whiteness, it is necessary to have softness; that is, the articles which come in contact with the skin must not be harsh and rasping, and, as one patient expressed it, "feel as though they had been starched with whitewash." This condition is brought about by the use of hard water, which causes a calcium or magnesium compound, called lime soap, or soap curd, to be deposited on the fabrics.

First Washroom Requisite

Every hospital wants, or should want, soft, snow-white sheets, bedspreads, towels, pillow-slips, napery, and so forth, all of which in the laundry are referred to as flat work. The first requisite for producing soft, snow-white work is what in the laundry industry is known as "zero" water, which means water of no hardness.

It does not matter how fine the washroom equipment may be, nor how excellent the soap, washing soda, and so forth, you supply to the washroom, its operatives will be seriously handicapped if they must use hard water, even if it only contains four or five grains of hardness to the gallon.

I may here add parenthetically that each one and three-tenths grains of hardness causes a loss of one pound of soap for each thousand gallons of water used in the suds baths—a loss which soon will pay for a water softener in most cases.

If hard water is used in the washing process, either in the suds baths or rinses, or in both, the goods will be impregnated with what is known as "lime soap," which is a rancid, sticky substance, insoluble in water. When this is deposited in the white fabrics they take on a grayish, dingy cast, and in addition to this the pieces are harsh and

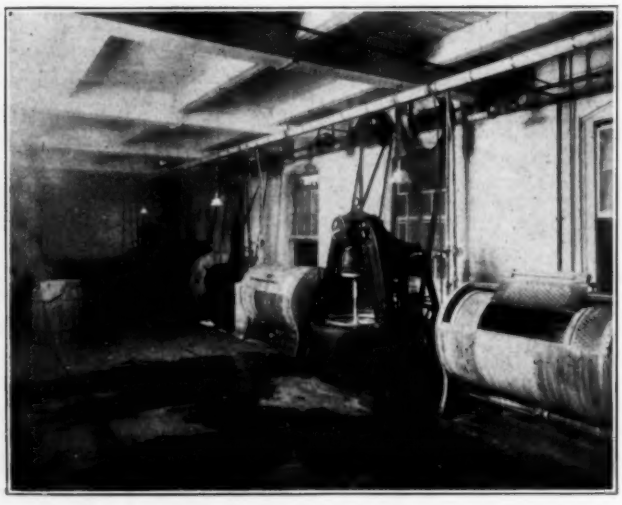
*This is the seventh of a series of articles appearing in The Modern Hospital, on the hospital laundry.

gritty to the touch. Then, in a futile effort to get rid of the lime soap, the average washman will over-wash and over-bleach the goods, thus shortening the life of the very expensive fabrics. The lime soap may be removed by a hot acetic acid bath, but if the use of hard water is continued, this is no use, because the lime soap will be deposited again.

With abundant absolutely soft water at his command, such as may be had by the use of one of the zeolite systems, a washman may wash the goods snow-white with a negligible amount of shortening of the life of any piece. Note that I use the word "may," for I do not mean to assert that the average washman "will" do this, even with soft water at his command. The average washman is prone to over-wash and over-bleach, regardless of an abundant supply of soft water, and if he has a hard-water pipe into his washing machines, he will be almost certain to rinse with hard water, thereby destroying most of the benefits of soft water. But that is a topic which we will discuss later.

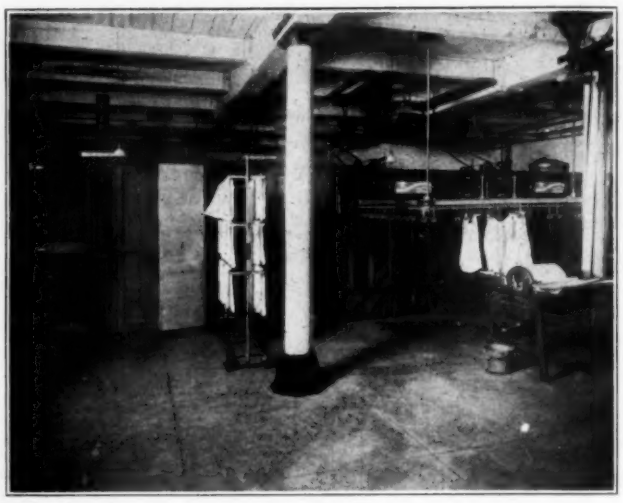
Washing Classifications

In the washroom of the hospital laundry the fabrics to be washed are divided into several classifications, and each class is washed by its own formula. In the average hospital, the flat work will constitute the largest volume of the goods to be washed. As a usual thing, the flat work which comes from the operating rooms and surgical wards is washed separately from the other flat work, because the pieces are stained with blood. This is not absolutely necessary, however, as no matter whether the articles are stained with blood or not, the same washing formula may



SECTION OF WASHROOM.

This view shows one side of the washroom of the laundry of the Dix Hill State Hospital, at Raleigh, N. C. There are in this section three all metal washers and two over-driven extractors. The washroom of this hospital's laundry has excellent light and is well ventilated, as one can see from the pictures.



VIEW OF DRYROOMS.

In the laundry of the Dix Hill State Hospital, at Raleigh, N. C., the large dryrooms adjoin each other. On the right is a conveyor dryroom, through which the pieces go automatically, after being hung on the endless chain. On the left is a plain dryroom, into which racks of goods are put. Both, of course, are steam heated.

cleanse all articles of like nature, and also sterilize all of them.

One group of flat work will consist of sheets, pillowslips, and similar articles, and these may be washed in thirty minutes, or in forty minutes at most. The first bath must be a lukewarm water and soda breakdown, or rinse, to remove the albuminous matter, such as blood, perspiration, and so forth, together with any loose dirt which may be in the goods. This bath must not be hot, for heat will cook the albuminous matter, just as it will cook and make insoluble the white of an egg.

One experienced and capable manager of a hospital laundry uses tri-sodium phosphate in his breakdown for bloodstained goods, in preference to either soda-ash or neutral soda, claiming that the former rinses out more freely with cold water than either of the latter. Others do not agree with him, however, so this is a matter for each manager to determine for himself, as is the case in many other instances where "authorities differ."

Another thing on which authorities have agreed to disagree is as to the merits of what is called the "low-water" washing system. With the low-water system about three inches of water is used in the suds, and about six inches is used in the rinses. Here, again, the manager must fall back on his own judgment, but I will say that the low-water system, especially where soft water is available, offers many advantages.

Usually, the second bath for flat work is a hot suds, of about twenty minutes duration. Some, by means of a steam jet introduced into the washer, bring the temperature up to 212° F., but this is not the best practice, for boiling shortens the life of the fabrics, and if wooden washing

SECTION OF IRONING ROOM.

This view shows a section of the ironing room of the laundry of the Dix Hill State Hospital, at Raleigh, N. C. The front part is devoted to the ironing of apparel, and the rear is devoted to the ironing of flat work. This is a very large room, with good light and ventilation.

machines are used, the boiling water gradually "pulps" the wood and destroys it.

As has been shown in a previous article, a temperature of 175° to 180° F. is high enough to sterilize the goods, and as the lower temperatures answer just as well as the higher for cleansing purposes, it seems that the safe course should be taken.

This brings up the necessity of having a reliable thermometer attached to each washing machine. There should be a clock in plain view, for time is an element. The matters of temperature of the hot baths and the time it is maintained are of extreme importance in the hospital laundry, because on the "killing" temperature of the water and the length of the bath depends the safety of the people in the hospital, both patients and employees. Some rule-of-thumb washmen assume that just because steam is arising from it, the water has reached a destructive temperature, forgetting that on a cold day water at 115° F. will throw off a large volume of vapor.

Some subject this class of flat work to a second suds, others do not. With soft water, a second suds is not necessary in many cases, for the goods will not always be badly soiled. It is better to have to wash a few pieces a second time than to over-wash a whole load.

After the suds comes the rinsing, and here again comes up the question of high-water or low-water. Rinsing is very important, as one must get out all of the soap and soda, if a rancid odor and bad color are to be avoided. With soft water, two hot and one lukewarm low-water rinses, with, say, six inches of water in the cylinder, will do the work.

Every so often, if snow-whiteness is desired, a bleach bath must be introduced into the washing process. Some bleach the goods every time the material is washed, but this is a wasteful practice, for even the mildest bleach which is practical will shorten the life of the fabrics. If bleach is used, the bath should be followed by what is called a "sour," which is a bath of acid, to neutralize any bleach or alkali which may remain in the goods, and also to pave the way for the blueing bath. Some washmen bleach in the suds, but the best scientific authorities pronounce this an improper practice.

For the sour, some advocate oxalic acid, some advocate acetic acid, and some the middle course of a mixture of the two. Acetic acid will not injure the goods, and as it is volatile, it is the safest to use. Oxalic acid is not volatile, and if not entirely rinsed out it may concentrate in spots and eat holes in the goods. Its principal advantage rests in the fact that it removes iron stains. If it is used intelligently, and without guesswork, it will give no trouble; but a washman who does not guess at things is a rare bird.

Blueing, like charity, often covereth a multitude of sins, and thereby is a sin in itself. The prevailing tendency is to overdo the matter. The common practice is to put into the bath about six times as much blueing as is necessary, and then rinse a lot of it out—but not nearly as much as should be removed.

Other Flat Work

The hand towels belong in about the same category as the bed linen in the matter of washing, and do not need many baths. Bath towels should be sterilized well, but they do not need much washing. The bedspreads may be washed in the

LARGE HAND IRONING DEPARTMENT.

This is a good view of the large ironing department of the laundry of the Dix Hill State Hospital, at Raleigh, N. C. It contains sixteen ironing boards, which shows that a large volume of hand work is done. Like all other departments of the laundry, it has plenty of light and air.

same manner as the sheets, but some claim that they need more bleach and blueing, although no good reasons are given for the assertion.

The table linen, however, may need two or even three suds baths, and a mild bleach with javelle water at each washing, for it usually contains coffee stains and food discolorations which are very hard to remove. A very small amount of starch, applied in the last rinse, together with the blueing, is advisable, for it improves the appearance of the goods. In the case of napkins, merely a slight trace of starch should be used.

Do not make the mistake of trying to remove all difficult stains in the washing machine, for it is foolish to subject a whole load to drastic treatment in order to remove stains from a few pieces. After the articles are taken out, remove the stains separately, by the use of spotting reagents. This matter will be dealt with in a future article.

MODERN METHODS OF ANESTHESIA

In a paper read before the West Virginia Medical Association, at Clarksburg, May, 1919, Dr. L. D. Norris of Fairmont, expressed the opinion that more should be known by the medical profession concerning the new methods of anesthesia, in order to decide whether or not they are really better than the old. Dr. Norris laid down four rules for the administration of a general anesthetic, as follows: (1) the anesthetic should be suited to the patient and should be modified, or changed entirely, as indicated; (2) the introduction should be pleasant to the patient, with respiration, blood pressure, and color reflex continuing normal; (3) the maintenance of anesthesia should vary with the surgeon's needs, at the same time the patient's condition should be as nearly normal as possible; (4) the transition from the anesthetic stage should be as gradual and smooth as the induction, the patient emerging as from a quiet sleep, without pain or nausea. All of these things may be accomplished by modern methods, says Dr. Norris, which are not in common use by surgeons who use only one method for everything. Anesthesia is an important part of the practice of medicine, and one method should not be adopted, regardless of conditions.

Nitrous oxid oxygen is one of the newer forms of anesthetic which is constantly gaining advocates. From the point of use, straight ether is undoubtedly the leading anesthetic today. But there are certain physiological effects of ether which mar its usefulness, such as its persisting and nauseating odor, its long and unpleasant induction, its long and unpleasant elimination, its destructive action on the red blood cells, and its general toxic effect. It is often found that patients are dreading the anesthetic more than the operation, and this fear often produces the very shock that it is important to avoid.

From the viewpoint of results, the ideal method of anesthesia is without doubt the system of anoci-association as developed and used by Crile. Anociation may be defined as absence of harmful association or impulses, and is applicable to the entire care, treatment, and environment of the patient. With perfect local anesthesia a light anesthetic like nitrous oxid is all that is needed to bring about a satisfactory narcosis, so this agent has been selected as part of the anoci systems. Some surgeons are using the nitrous oxid-oxygen-ether sequence for general anesthesia, and omitting the local anesthetic, the results obtained are not quite as good as when the full anoci system is used, but there are several advantages of this method over open drop ether. This method takes first place as far as safety is concerned, especially if administered with oxygen. It cannot be administered by untrained people, as is the open drop ether method, or the fatalities would exceed those of any other anesthetic, but when it is given by one trained for the work, it comes nearer to fulfilling the four laws than any other method known today. With proper apparatus and a trained anesthetist, nitrous oxid and oxygen can be administered for long periods in major surgical operations. Cyanosis can at all times be avoided, the induction is pleasant, as the gas is odorless and tasteless, and a few inhalations produce unconsciousness, it is quickly eliminated, and produces very little nausea. Preliminary medication by morphine sulphate grain one-sixth and scopolomine grain one hundred and fiftieth from one-half to one hour before the operation, renders nitrous oxid anesthesia deeper and smoother, and ought always to be used in all prolonged administrations. Scopolomine has a special sedative effect on the higher cerebral centers. This particular medication is an important factor in this system whether nerve blocking is done or not, substituting atropine for scopolomine alters this factor. If this does not produce sufficient depth of anesthesia, ether should be added in small quantities, as an adjuvant to nitrous oxid. The anesthesia is quickly deepened to any desired degree in this manner. With the closed method of administering nitrous oxid, oxygen and ether, pneumonia is reduced more than fifty percent, post-operative nephritis becomes extremely rare, there is less likelihood of nausea, and nourishment may be given relatively early. In acute infections such as peritonitis, nitrous oxid has a special advantage, for it does not reduce the resistance by breaking down the phagocytes as is done by such lipoid solvents as ether.

In obstetric practice nitrous oxid is used with success. It is not suitable for very young children, or persons with a generally weakened musculature, or for the very old.

There are comparatively few contraindications to nitrous oxid and oxygen, and although Dr. Norris does not recommend any anesthetic agent or method as a routine, yet he believes from his own experience and that of others that this method has a wide range of usefulness.

PLANS DEPARTMENT OF PUBLIC WELFARE

Brigadier General Charles E. Sawyer, President Harding's personal physician, has presented to the Senate Committee on Education and Labor a plan for the creation of a new executive department of the government with a Cabinet officer at its head. The plan provides for an executive department to be called the Department of Public Welfare, with four main divisions, covering education, public health, social service, and veteran's service administration. All the existing agencies of the government dealing with health matters would be placed under this department in the Public Health Division, in charge of an assistant secretary. The arrangements are to coordinate research work, quarantine, sanitation, and hospitalization.

General Sawyer declared that there is no reason why the United States should not have the greatest public health service in the world since it has the surgeons, investigators, and laboratories to make this possible. He stated that there was no reason for having existing public health service under the Treasury Department.

COLOR IN THE MODERN HOSPITAL

By WILLIAM O. LUDLOW, of Ludlow and Peabody, Architects, New York City

GOD everywhere decorates His handiwork with color. As I look out over the fields, after a snowfall, I notice that Nature, even in this robe, her most colorless dress, still has brown leaves on the oaks, purple shadows spread on the snow, silver gray bark on the birches, green foliage on the conifers, bright red berries on the low shrubs, ultramarine mountains along the horizon, and a turquoise blue over our heads.

Man insensibly loves color, for it was doubtless spread for his enjoyment as well as for utility.

Now, whatever brings pleasure, brings not merely a passing sensation, but something that ministers to mental health and bodily well-being. Perhaps we have not appreciated this as we might, but have considered color merely as something to assist in the pleasurable sensation created by beauty.

Mental Reactions from Colors

Color produces distinct mental reactions, and we know, of course, that mental reactions are immediately reflected in bodily condition. These reactions are brought about partly by the association of ideas, for from time immemorial, different colors have been assigned significance. Black, for instance, is used quite generally in the civilized world to indicate sorrow; red means danger; purple is associated with royalty. Again, blue is associated with coldness or cheerlessness; we say a man has the "blues." Red is associated with heat and passion, we say a man sees "red"; and white connotes sterility and lack of virile quality, we say one is "white livered" or shows the "white feather." By association, therefore, color may produce subjective emotions.

Aside from this, the effect of color often produces real excitement or depression of the nervous system, purely as a physical reaction. One cannot sit in a bright red room for any length of time, with a feeling of comfort; we say the key is too high, which means that the nervous system is unduly stimulated. A blue room may be pleasant enough on a warm summer day, but the color is not stimulating, and its great absorption of light, and particularly of the yellow rays, makes it devoid of cheer. White, except in great monumental work, is to be avoided, for although it does not absorb the impinging light, it suggests sterility, coldness, and lacks all power to create pleasurable and helpful sensation. Green is a restful color and, when used in the lighter shades particularly, makes an agreeable surrounding.

The sunshine colors, gold, yellow, and buff, used on walls and ceilings in appropriate tones, bring to the inside of the house something of the joy of the sunshine, as we see it on fields and woods.

Color Applied to the Hospital

Let us consider now how these observations apply to the hospital. There is a general feeling of antipathy for the hospital, that should not and need not exist. True, it is a place of suffering, but its chief object is relief of suffering, and its more important function is convalescence.

Our feelings and sentiments of antipathy or attraction are largely influenced by the impression that the appearance of things makes on our minds, and the heretofore grim and institutional aspect of the hospital without, and its cheerless and barren appearance within, are partly responsible for the common dread of an institution whose very atmosphere should breathe a welcome.

But our thought has been so engaged in bringing about ideal negative conditions, no dirt, no noise, no odor, that we have often forgotten the positive conditions of environment that may be more effective in bringing back bodily health than what the nurse gives from the spoon. During the period of recovery, the mind of the one in the hospital bed is perhaps more than usually responsive to the aspect of his surroundings. The tired eye that forever roams over wall and ceiling until every crack is known by heart, craves something more positive than barren white walls; it wants objects of interest, such as pictures, stenciled patterns, hangings at the windows, and above all, the repose and warmth that only color can give.

White is negative; the convalescent needs the therapeutic reaction of the positive colors that Nature has spread so lavishly for her children. Her forest walls of white leaves! Her carpet of white grass! Her limitless ceiling of white! God forbid. Our eyes were made to find rest and contentment in soft greens, pale blues, an occasional touch of red, but above all, in the glorious golden yellow of the sunshine.

Warm Colors Best for Hospitals

White is the winter color, dazzling and brilliant, but is somehow reminiscent of winter's cold and cheerlessness. Let us, then, cover our hospital walls with color, selecting those that give

warmth and quiet, and that gentle stimulation that helps the patient along the road to recovery.

On the hypothesis that white may to advantage be replaced in many rooms in the hospital by warmer colors, let us particularize. Our first introduction to the hospital is usually through the main entrance lobby, which should be like the warm handclasp and friendly smile of the sort of new acquaintance that one likes to meet. How many hospitals that you know have this welcome, and how many greet you with walls as cheerless as a whited sepulcher, with "Institution" written all over them? It is just this lack of warmth, this "institutionalism," that keeps thousands of sick people in their inadequate homes, when they should have the care and treatment that only the hospital can give.

Lobby Should Have Welcoming Tone

In decorating the lobby, therefore, I would use the same kind of color schemes as express the welcome of the entrance to the hotel or club house, or even the private residence. Let the ordinary rules of good decoration govern, using sunlight tones if the lobby is not well lighted, and duller shades if there is plenty of real sunlight.

In a recent hospital we adopted a Pompeian scheme with its customary primary color tones of red, orange, and blue. It suited this particular lobby and its lighting admirably, and with the addition of appropriate hangings, makes the entering patient feel that perhaps the hospital is not such a bad place after all.

Adjacent to the lobby is usually the waiting room for visitors or prospective patients. I cannot see the reason for linoleum floor covering, sanitary baseboards, coved wall and ceiling angles, undecorated walls, and no window hangings, unfortunately so common in this room, which has its full share to contribute to the atmosphere of the building. A well chosen oriental rug, substantial wicker furniture, upholstered with quaint chintzes or cretonnes, with window hangings to match and walls painted to tone in, take away all "institutional feeling"; they are cheerful and give a real welcome.

Buff Has Essential Qualities

For the private rooms, wards, halls, and operating room, if I were told that I might choose just one color for all, I would select a light, warm gray tone, more commonly called buff, for this color has more of the essentials than any other. These essentials are, first, a proper conservation of the light in the room by reflection, for sunlight and electric light are both valuable. Second, the color must be one not too easily soiled; third, it must not produce eye strain; and fourth, but not least important, it must be agreeable and cheering to the patient. As I have pointed out previously, this quality is therapeutic to a degree not to be underestimated.

Now let us take this "buff" as a base color, and I will assume that my client has given me permission to vary it according to type of room and orientation; what will I do with it? In the wards or private rooms on the north, where the sun's rays seldom enter, I will mix a little yellow with it to simulate the sun's glow. In the east and west rooms, where the sun comes in for part of the day, I will leave it as it is. In the south rooms, where bright sunlight can be obtained most of the day, I will add just a little gray and a little green, making a cooler color than other rooms require. A French gray is very pleasant for private rooms with southern exposure, particularly if enlivened by window hangings, rugs, or furniture showing touches of pink.

Darker Rooms Have Yellower Shades

Hallways, which are apt to have less natural light than bedrooms, are best painted with sunlight color; this applies also to kitchens, laundries, and such rooms as do not get an abundant supply of sunlight. These might be painted like the north rooms.

The operating room, to my mind the most interesting room in the hospital, because of its highly technical requirements, should have most careful consideration given to its color scheme. The surgeon, when operating, must have a great abundance of light, yet without glare. White glazed tile and white walls, used so much formerly, have largely been replaced by color and texture with less glare. In one hospital a soft olive green wainscot five feet high was used, with light color on walls and ceilings. The green is most agreeable to the eyes of the surgeon as he bends over his work, but on raising his eyes, a visual shock is caused by the sudden transition from the absorptive green to the reflecting white. I know of nothing quite so satisfactory as a dull French gray tile for the wainscot, and a lighter gray for reflecting surfaces above. Thus no visual readjustment is necessary to the surgeon on lifting his head, and yet the light in the room is conserved by suitable reflection.

I do not want to close without a few words about furniture and stencils, and their decorative value as applied to hospitals and sanatoriums.

"How much does it cost?" is usually our first question whenever we are about to buy something. To "buy" what stencil decoration gives

is a good bargain, for there are not many things that give so much beauty, so much interest, so much cheer and indication of considerate thought at such little cost. Having no projections, moreover, it is not a "dust catcher." We all know that a stencil is merely holes cut in paper to form a pattern, and the stenciling is merely brushing paint repeatedly through these holes onto the wall or ceiling, so that the process is quick and inexpensive. A little hand touching in other colors is, however, advisable, to give a sparkle to the design.

The eye wearies with too much plain, unbroken surface, and by the eye we mean, of course, the mind, and that, in natural consequence, means the physical well-being. Then, after our walls and ceilings have been painted the proper tones, let us by all means comfort and entertain the convalescent mind by some fanciful leaf bands, punctuated perhaps by bright berries, or perhaps by suitable conventionalized birds, flowers, and, if it is where children will see it, we might use quaint animal forms, or the ever entertaining brownies. But always in rooms where one must look at it for long stretches of time, make the design one which will have distinctly imaginative qualities.

What of furniture—must we use only white enameled beds, bureaus, and tables? There is nothing quite like an iron bed frame for ease of cleaning and indestructibility, for wards and general use, therefore, it is advisable. I do not believe though that it must be white enamel. Iron beds painted with light blue, green, buff, and brown are common now; they are quite as serviceable as white, and much more grateful to the eyes of the patient. Private rooms should be furnished very similarly to home rooms with bed, bureau, table, chairs, etc., of oak, birch, or maple, or tastefully painted wood, avoiding, however, unnecessary mouldings and ledges. Dainty, washable hangings at the windows are almost indispensable in sick rooms, to give the homelike atmosphere.

I would make it plain, however, that I emphatically do not advocate equipping, furnishing, and decorating a hospital just like a home or hotel. My feeling is merely that in the past years we have overstressed the appearance of sterility, and neglected to give a reasonable emphasis to the therapeutic value of consoling and cheerful environment.

The therapeutic effect of a mind led away from its own ennui and burdens is often better than medicines, and a contented spirit is one of the steps on the road to health.

STORING FOODS IN THE HOSPITAL

By HERBERT O. COLLINS, M.D., Director of Hospitals for Fresno County, California

IN CONNECTION with the best means of storage, foods may be divided into three general classes: those which can be safely stored in an ordinary dry storeroom, those best kept in a root cellar, and those requiring cold storage or refrigeration.

The first class includes chiefly the cereals, flour and meals, dried fruits and ordinary canned vegetables and fruits, and canned meats and fish. There is some advantage in storing the canned goods mentioned in a special compartment of a root cellar, where there is no danger of freezing or overheating, and in which the temperature can be kept fairly uniform.

When kept in a storeroom, cereals will be best kept in bins, either made entirely of metal, or of wood, metal lined. This is important as providing protection from vermin and rodents, as well as for ordinary cleanliness. It seems unnecessary to say that cereals should never be kept in open barrels or open bins, exposed to dust. The same arrangement can be used for the preservation of dried fruits, providing they cannot be conveniently accommodated in the room of the storage cellar provided for canned goods. All such articles should be regularly and carefully inspected at frequent intervals, in order to be sure they are in good condition and are not deteriorating. If cereals are purchased in cartons they may be safely stored on shelving, but they are more expensive than when bought in bulk. If purchased in large quantities, however, they are not so easily inspected.

Tea and coffee should be stored in a dry place, in air-tight metal containers. Coffee should be freshly roasted, preferably by one skilled in the process, and should be ground daily as needed. Flour and meals can be kept in the sacks in which they are received, and stored on shelves in any dry place, or in barrels. They should be carefully protected from rats and mice.

Many vegetables, fruits, and roots may be successfully stored in a root cellar for many months. This is also a good place to keep canned fruits and vegetables, jellies, jams, marmalade, and preserves. If no such place has been provided in the

*This is the fourth of a series of articles appearing in The Modern Hospital on the hospital's food service.

original construction of the hospital, it is usually possible to find a portion of the basement which by some remodeling can be made into a practical root cellar at slight expense. If possible, a portion of the basement which can be shut off without interfering with the use of the rest of the floor should be selected for the purpose. It should be near enough to the basement entrance to make delivery of the foodstuff as easy as possible. It will need at least one window for ventilation, but should not be too light. All steam and hot water pipes, or other sources of heat, should be removed. If made of stone, concrete, or brick, the outside walls of the building, as well as the ceiling, will require some form of insulation. But a dirt floor, protected by slats, is the best floor which can be obtained, as a certain amount of moisture in the air is necessary. If there is a cement floor in this part of the basement it should be taken up and a well packed dirt floor substituted.

A cheap and convenient insulation can be provided by first nailing studding on the walls, and covering these on the inside with lath and plaster, leaving an air space between the plaster and the outside walls. The ceiling should be treated in the same way unless already plastered. If it is necessary to construct a new wall to shut off this portion of the basement, or to put in partition walls to divide the root cellar into compartments, such walls may be constructed by the use of studding, plastered on the inside, and covered on the basement side with a layer of sheathing, and one of tongue and grooved siding, with building paper between. Partition walls should be plastered on both sides. A more durable job will result if cement plaster is used rather than the ordinary lime plaster. The door should be wide enough to admit barrels and the ordinary trucks used about the hospital.

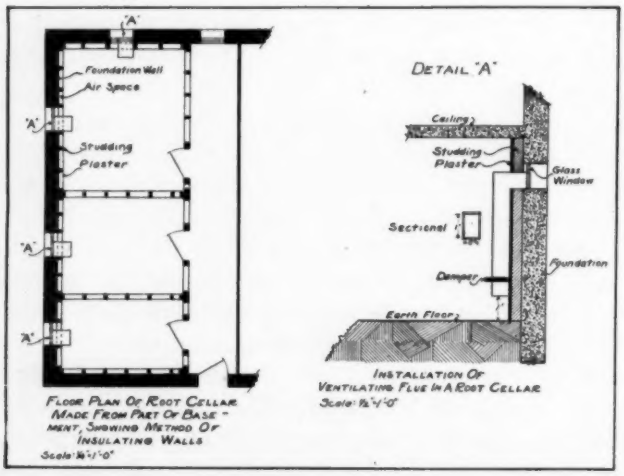


Fig. 1. Floor plan of a root cellar.

The windows of the root cellar should be darkened, either by boxing them over, or by painting them with a dark colored paint, removing one pane of glass for ventilation. Into this should be inserted the end of a ventilating flue about six or eight inches in diameter, leading down the wall to within a foot of the floor. This should contain a damper, and the end connected with the outside air should also be covered by a door which can be closed in the coldest weather. The ventilating flue can be made of wood, or an ordinary stove-pipe may be used for the purpose.

If it is planned to keep a variety of products in the root cellar, it will be found desirable to subdivide it into at least three compartments, each with its own independent ventilation, in order that the temperature and humidity of each room may be regulated as necessary, according to the needs of its contents. One such room would then be used for articles needing a comparatively low temperature with a high humidity, the second for those requiring a dryer air but which can stand a little higher temperature, while the third and probably the smallest of the three will be useful for the storage of canned goods, for which an even and cool temperature is desired, with less importance attached to the control of the humidity. The accompanying plan, Figure 1, illustrates a root cellar constructed in this way.

In such a cellar the temperature can be fairly well regulated by the intelligent use of the dampers in the ventilators. In the warmer months these should be opened in the evening in order to admit the cooler night air, and closed in the morning. The doors should be opened as seldom as possible.

Since a certain amount of cold storage can be carried out in the hospital, there are fundamental principles which need to be understood, even though food is stored there for only a short time. The relative humidity of the air is important, both in the root cellar and in the cold storage rooms, and will differ for various products, as will also the required temperature. When the humidity is too low there will be deterioration of the contents of the room due to increased loss of moisture by the products, resulting in shrinkage or wilting, while if it is too high, moisture will be deposited, making conditions favorable for growth of molds and bacteria. Too low a humidity may be remedied by setting tubs of water in the room, hanging wet cloths from the ceiling, or by allowing a jet of steam to escape into the room at intervals. Most of the common fruits and vegetables keep best in a cellar in which the relative humidity is rather high, with

a temperature just above the freezing point, although a few of them, especially onions, require a dryer atmosphere and a little higher temperature. The containers should be clean and strongly made. If articles are stored in sacks or crates they should be so stacked as to leave free circulation of air between them.

It is quite important that foods be in good condition when placed in storage, otherwise the result will be discouraging. Only the best qualities should be selected for the purpose. It is hardly possible to emphasize too strongly the importance of holding an even temperature in both the cold storage rooms and in the root cellar, as fluctuations of temperature shorten the life of both fruits and vegetables and injure their keeping qualities. The same effect will be the result in the case of meats, fish, and poultry.

Foods most suitable for preservation in cold storage are apples, butter, eggs, cheese, meats, poultry, fish, dried fruits, and syrups. Those more suitable for the root cellar are potatoes, sweet potatoes, onions, carrots, turnips, rutabagas, cabbage, canned goods, jellies, preserves, and marmalades.

Potatoes should be placed in the root cellar in the autumn, selecting for the purpose, sound, well matured potatoes, free from blemishes or bruises. Carrots, rutabagas, and turnips should be cared for in the same way, and may be placed in the same room. They should be handled carefully, as cuts in the skin or bruised spots will injure the keeping qualities. Fluctuations in the temperature of the cellar should be avoided as much as possible, and the room should be dark, to prevent sprouting, well ventilated, and protected from freezing. The best temperature is from 35 degrees Fahrenheit to 40 degrees Fahrenheit, with a humidity of from 80 to 85 per cent. They can be stored in burlap bags, ventilated barrels, boxes, crates, or bins. If placed in bins, the bins should be built of slats, and should not be more than five or six feet deep. Frequent inspection should be made to see that the stored articles are in good condition. With proper conditions they should keep well for at least six months. A shrinkage of from 6 to 8 per cent may be looked for.

Sweet potatoes are more difficult to keep than Irish potatoes, and require somewhat different handling. Special care is necessary in their selection, since they must be absolutely free from bruising or damage of any kind. They are best kept in a root cellar in which the humidity is never high enough to cause a deposit of moisture upon the product, or upon the walls of the room. For the first couple of weeks after they have been

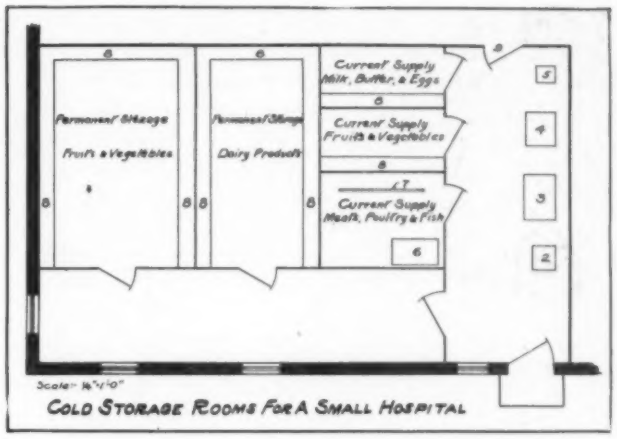


Fig. 2. Cold storage rooms for a small hospital.

1. Delivery door. 2. Scales. 3. Meat block. 4. Sink. 5. Meat grinder (electric power). 6. Fish box. 7. Overhead track carrying meat hangers. 8. Metal Shelving. 9. Corridor to general storeroom.

placed in storage the temperature of the room should be fairly high,—between 80 degrees and 90 degrees Fahrenheit if possible. It should then be lowered to between 50 degrees and 60 degrees Fahrenheit and kept as near that point as possible thereafter. It is best to store them in well ventilated bins, but crates or baskets may be used. No attempt should be made to keep them longer than three or four months. Shrinkage will be somewhat greater than for Irish potatoes.

Onions can be kept for about six months, but will show a shrinkage of over 10 per cent. They require a low humidity, but the temperature may be somewhat higher than for other products, providing it is fairly uniform and the room is well ventilated. Bermuda onions cannot be successfully kept in a root cellar. Onions are sometimes placed in cold storage.

Only the most solid heads of cabbage should be selected for storage. All loose leaves should be removed, and the heads should be very carefully handled so as to be kept free from damage. The cellar should be well ventilated and frost proof, the best temperature being just a few degrees above the freezing point, with a humidity range as high as possible without causing a deposit of moisture upon the cabbage. It is best to place the heads in single layers upon slat shelving. Handled in this way, cabbage can be kept in good condition for five or six months.

Few hospitals will be justified in operating large cold storage plants or in attempting to preserve large stocks of food products on their own premises for a great length of time. Such work has become quite scientific and needs to be supervised by experts in the art of cold storage. Foods require different conditions both as to temperature and humidity, and only constant attention by specially trained persons will avoid deteriora-

Fig. 3. Bins for the storage of cereals, coffee, tea, etc. They are made of heavy galvanized sheet steel, with oak fronts. They are of the removable type and may be taken out for cleaning and weighing.

tion of products so stored, with the loss of large sums of money. It will usually be found both safer and more economical to pay storage charges and have such products as butter and eggs, at least, placed in a reliable cold storage warehouse, and delivered from there to the hospital cold storage rooms as needed, in comparatively small quantities. Under this system, butter can be purchased, in most parts of the country preferably in June, in quantities sufficient to last eight or nine months, and placed in storage. About a month's supply should be removed at a time, worked over, and placed in the hospital cold storage rooms for current use. Butter so stored in June will be found perfectly good till the following March or April, or even longer, and the advantage of buying in large quantities, when the quality is best and the price lowest, will be considerable.

Eggs, before being placed in cold storage, should be carefully selected, and should be large and of uniform side. They should be carefully handled to insure their good condition, and should not be washed. Those laid in March or April keep best, and should be marked in order that they may be saved for mid-winter use, while those laid later, probably in June, will not keep so well, and should be used in the fall and early winter months. They are best kept in cold storage, with a uniform temperature as near 32 degrees Fahrenheit as possible, and a humidity range close to 85 per cent. They should be packed in clean wood cases, with new fillers of strawboard or wood pulp board. If padding is used, it should be clean and dry, kiln dried excelsior or cork shavings being the best, with wood pulp board on the top and bottom of each case. Pine excelsior should not be used. If the cases are stacked, a space of about one inch should be left between them. Such eggs should be good for poaching or boiling at the end of six months, and are available for other uses for a year.

Apples are difficult to keep in storage of any kind, and few hospitals will be justified in attempting to store them for a very long time, or in large quantities. If it is desired to do so, they should be carefully selected to see that they are sound, well matured, fully colored, and free from mechanical or other injuries or blemishes. They should be stored as promptly as possible after picking, as a delay of even a few weeks before placing them in proper storage will very materially affect their keeping qualities. They may be successfully kept for short periods in a root cellar, which should be maintained as near the freezing point as possible, but never below it. They may be kept longer in cold storage, with a temperature of about 31 degrees or 32 degrees Fahrenheit and a humidity range of about 85 per cent. In either place they are best kept in barrels or crates, or shallow bins. If in containers of any kind, they should be so stacked as to provide free circulation of air, and they must be frequently inspected.

If the hospital is to provide for cold storage of food products to any extent, it is best to have two sets of storage rooms. One set should be used for storage purposes only, in which the doors need seldom be opened and the contents disturbed as little as possible. The second and smaller set of compartments should be reserved for the daily or current supply, and small quantities of products removed to them from time to time from the more permanent storage rooms. The second plan, Figure 2, illustrates a cold storage department for a hospital, in which such a system can be carried out.

UNITED STATES CIVIL SERVICE ANNOUNCES EXAMINATIONS

The United States Civil Service Commission announces open competitive examinations for the positions of roentgenologist, at $200 to $250 a month; associate roentgenologist at $130 to $180 a month; assistant roentgenologist, at $90 to $130 a month; junior roentgenologist at $70 to $90 a month; and vacancies in positions requiring similar qualifications, at these or higher or lower salaries. For any of these positions the entrance salary will depend, within the range stated, upon the qualification of the appointee as shown by the examination, and the duty to which assigned. In addition to the salary, the appointees will be allowed quarters and subsistence, and laundry, when these are available.

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Applicants should apply at once for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C. Applications will be rated as received until August 1, 1921.

STANDARDIZATION OF HOSPITAL ACCOUNTING*

By R. W. HUNTER, Chartered Accountant, Vancouver, B. C.

The methods of and reasons for standardizing hospital accounts and the beneficial results of so doing are: The large amounts of money expended on hospitals call for the most efficient system of accounting made uniform for comparative study. An active central organization in control of accounts with such subsidiary services as are necessary and a system giving all the information required by those in charge of the operating of the hospitals is essential. The value of accounting must be fully recognized by those in charge of the operation of the hospitals. Every hospital, and hospitals as a whole, will benefit both financially and from the point of view of efficiency by standardization.

THE time is long past when we kept our accounts by cutting a notch or tying a knot to record each transaction, although this method is recorded in the early history of accountancy. Gone also are the days when accounts were written by a chisel on a slab of stone. To trace the various steps in the development of accounting is, however, not the purpose of this paper.

At present we have systems where machinery relieves us of considerable work, and gives better results. We have other systems, which, although mechanical methods are not employed in them, exhibit as great development. Perhaps mention of the convenience of the loose leaf ledger as compared with the old bound ledger, although only one example among hundreds, will be most suitable, as it is something which is generally familiar.

The older times probably did not call for any better system than that in vogue at the time, the speed at which people lived then being much slower than that at which we live today, and the financial and economic systems were not so complex. Business houses, particularly manufacturing concerns, have kept abreast of the times in the development of their accounting systems. There have, however, been many laggards, but even they are now fast adopting the more modern methods.

Have our hospitals recognized this progress in accounting and given effect to it in their systems? Look back upon the past days of surgery when amputations were performed without anaesthetic, the days when the terms aseptic and antiseptic were unknown, the days when the patient died of what was commonly known as inflammation of the bowels, instead of being able to regale his or her friends with the details of an operation for cure of inflammation of the vermiform appendix of the caecum. What would you think if the medical or surgical side of the hospital were conducted today on these old lines?

Do the hospitals realize the tremendous sums of money expended on them not only in the aggregate but in individual cases, that call for their recording in the most efficient manner possible? I am not aware how many hospitals were in existence in the days when each doctor cut a notch in his stick to record a visit chargeable to his patient, nor do I know to what extent the government of the day financially aided such institutions; but I am convinced that the increase in financial aid from them until now, although not in so great a ratio as the progress made in the sciences of medicine and surgery, follows pretty closely. Have we a similar progress in our methods of recording and controlling these finances so that the greatest benefit may be obtained from them? The government in British Columbia spends about a million dollars a year on general, mental, and other hospitals, which approaches an absorption of 10 per cent of the total revenue of the Province.

To record this huge expenditure so that it will be of benefit to us in our operations, our accounting systems must be thoroughly up to date. To administer efficiently the funds involved so that the best results can be obtained from the expenditure, the government must be in a position, for instance, to say to any hospital applying for a grant, your hospital has a larger per capita deficit than other hospitals of similar size, and not only to tell them that the net per capita deficit is greater, but whether the deficit is caused by excessive per capita costs or deficient per capita receipts; and, still further, to tell them which particular section of the costs is high or which particular section of the receipts is low. The government fully appreciates the benefit of standardized accounts as is evidenced by their efforts to collect the forms in use by the different hospitals. To be in a position to make such criticism the accounts and accounting systems of the hospitals of the Province must be standardized. To my mind this point cannot be argued. It is to be admitted, however, that the accounts and account-

*Read before the third annual convention of the British Columbia Hospital Association held in the King Edward High School, Vancouver, June 23-26, 1920.

ing system of a small country hospital cannot be standardized in such detail as a large city hospital and no useful comparison could be obtained by attempting to do so. For the matter of convenience, the general method of keeping the accounts would, in so far as it is possible, be the same; but the details would be different. In standardizing it may be necessary to create two or more groups. The basis of forming such groups will have to be determined by two factors: first, the particular accounting system which will be the most efficient for the hospital involved; second, the possibility of making a useful comparison between hospitals.

It is little realized, except by the most discerning, that the standardizing of accounts and accounting systems of hospitals will have a tremendous effect on the efficiency of hospitals individually and collectively. In the same way that a legal document binds the parties concerned to a definite course of action, so will a definite standardized accounting system automatically create a standard up to which the individual hospitals will endeavor to live. In the report of the committee appointed by the British Government to inquire into the reorganization of the whole of the machinery of government of the British Isles, it was stated that a standard is becoming progressively recognized as the foundation of efficient action. Picture ourselves without any standards of living, what a chaotic state we would find ourselves in! The state of hospitals without standardized accounts may figuratively be likened to society without standards of living.

Benefits From Standardization Are Immediate

Let me give a few of the benefits which will accrue from standardizing of accounts and accounting systems.

(1) The hospital, be it large or small, will see from its own records, which will be kept according to the best standard by comparing month by month and year by year, how it can economize in any particular section.

(2) Each hospital, by comparing its costs and receipts with those of other hospitals in the same group, will see in what particular cost it exceeds some hospitals and in what particular receipt it falls below others.

(3) The central organization or government department will be able to bring to bear critical faculties unclouded by local considerations or conditions, and will be able to offer constructive criticisms based upon its oversight of other hospitals.

(4) A spirit of competition between hospitals of the same group, leading to greater efficiency, will be created.

(5) There will be a psychological effect on the individual employees—employees being used in a broad sense to include all kinds of personal service, be it doctors, nurses, pharmacists, accountants, orderlies, or any other employees—in causing them to appreciate the fact that the hospital as a whole is in competition with other hospitals and will so unconsciously bring them into competition with each other.

(6) The community in which the hospital is situated will begin to appreciate the fact that their hospital is as efficient as other hospitals, and they will be more inclined to support it financially.

Now, each of the benefits, in addition to having a value in service to the patient, has a real money value, which can be utilized still further to increase the efficiency of the hospital, and produce further money values. Each hospital, be it the largest of the city or the smallest of the country, has one if not more ways in which it could make a little capital expenditure, and by so doing save on the cost of operating, or produce a greater service to the patient.

Central Organized Control of Accounting

There is more, however, in the standardization of accounts than the mere keeping of accounts under the same headings and in the same way. There must be a centralization of active control of accounts if standardization is to bear full fruit. In the case of railways the government orders that accounts shall be kept under certain defined headings. In the same way hospitals receiving financial aid from the government or municipalities could profitably keep their accounts on a defined system rather than adopt individual ones. During the war the anti-aircraft defense in Britain became very well developed. Their method was to have anti-aircraft observation stations throughout the country, which, by specially constructed mechanism were able to obtain certain information concerning the approaching aircraft, but it was only through a central control station receiving all the observations from the individual stations that they were able to determine the height at which the enemy aircraft were traveling, the speed at which they were traveling, and when they would reach certain given areas. After each attack the central station was able to trace the whole flight and times at which the craft were over different places, from the time they left enemy lines till they, or whatever was left of them, returned. I suggest the consideration of this principle and its application to the control of the accounts of hospitals.

Since health is one of the greatest national assets, it is logical to conclude that the state should conserve its asset. An active centralized control of accounts by the government must inevitably lead to its active control of the operations of the

hospitals through some such organization as was outlined by Mr. Banfield at your last convention, in his paper "The Duty of the State towards the Hospitals." This must therefore be borne in mind when it is decided whether the central organization shall exercise an active control or be merely advisory. The standardization of accounts with only an advisory central organization will not realize the maximum benefit. The central organization should draw up the necessary forms of books and reports, and from the point of view of economy, have them printed and issue them as required to the individual hospitals.

Fundamentals of Accounting to be Observed

There are certain essentials which any system of accounts must contain to be efficient. The most beautiful accounting system in the world, from a theoretical point of view, might be in existence, but it would be failing if it did not give those in charge of the operating of the hospital the information they want, in the way they want it, when they want it. It goes without saying, of course, that the accounts have to be kept in such a way as to show that the funds are all accounted for. The accounts of a hospital should be run as if the hospital were a business enterprise and go into quite as much detail as if the hospital were being operated by the keenest of business men.

The detail of how these accounts should be kept in each hospital must be worked out by those in charge of the standardizing of accounts. Suffice it to say that the larger hospitals will only be able to reap full benefit if their accounts are kept showing each department separately.

The accounts of hospitals should exhibit the moneys received, its transformation into fixed assets such as plant, buildings, and real estate, into labor, material expense and the subsequent transfer of the combined product, which is service to the patient, to accounts receivable, and finally their transfer to cash or uncollected accounts. The processes of transfer should be most carefully recorded in all their stages. Even the physical inventory of the plant should be as carefully kept as the cash book.

It will require very careful study to evolve the standardized forms and records, and care must be taken to see that no hospital be put in the position of having to attempt to conform to a standard set of accounts which is not of use to it. Yet no hospital should say "Our hospital is different from any other; we cannot conform to a standardized system of accounts." At school in Scotland, in our arithmetic class, we had to find the L.C.M. (lowest common multiple), I do not know what you call it here) of certain given numbers, which, it is not necessary to explain, is the lowest number into which all the given numbers could be divided. If I remember correctly, this problem was accomplished by finding the factors composing each number. Accounts are as capable of being scientifically analyzed as samples in the chemical laboratory, and I have no hesitation in saying that if standardizing be properly carried out, you will be able to erect a monument to your old accounts and inscribe on it the epitaph which appeared over the grave of a none too popular lawyer in his little home town—"Here lies the body of John Brown—Everybody satisfied."

In order to reap the full benefit from standardized accounts it is essential that they be properly kept, and regular returns made to the central organization. In the large hospitals this should present no difficulty, as there are already trained accountants on the staffs. In the smaller hospitals, although care would be taken to have the system as simple as possible, I would suggest that the treasurer of the board, if the institution is too small to employ even the partial services of a bookkeeper, be conversant with accounts, and that he keep the records. This, however, is a matter for each hospital to settle for itself.

Standard System of Collections Desirable

Under the heading of "accounts" comes the laborious and working matter of collecting amounts owing by patients. In standardizing the accounts, I would recommend that as far as possible a standard system of collections be adopted.

I suggest that the responsibility for collections, once the patient is outside the hospital, be assigned to a particular member of the board, who in the case of a large hospital would have his staff of collectors, and, if the hospital were small, would make the collections himself. A central organization of all hospitals could receive lists of persons owing accounts who have moved away and would forward such for collection to the district to which the person had gone. A system such as this would operate to the benefit of all hospitals.

I have touched so much on the question of central organization that I cannot refrain from making a suggestion, which although absolutely outside the sphere of my paper, is brought forcibly to mind in connection with the recommendation that books and forms be printed by the central organization. My suggestion is that a central purchasing agent be appointed for all hospitals, or at any rate the smaller ones. This would save a considerable amount of money, for by being able to place orders for large quantities of

supplies, they could be obtained at very low prices. I understand the Provincial Government have found that their appointment of a central purchasing agent for most supplies has proved to be of considerable benefit. I see by the title of the paper of Mr. Leders, who is following me, that my suggestion does not interfere with the subject of his remarks.

However, to get back to the subject of this paper, "Standardization of Hospital Accounting," another point has to be referred to. When I had the privilege of going through the systems of some of the larger hospitals in Canada, I learned something new in each one. My greatest education was in the Royal Victoria Hospital in Montreal. There I had the honor of being conducted through the hospital by the assistant matron, and very efficiently did she cover the ground. It struck me very forcibly that I was looking at things through the spectacles of an accountant, whilst she viewed them through those of a matron. This set my mind working in order to discover how many points of view there are in examining a hospital. The accountant, to conduct efficiently his department, should not look at matters solely from the accounting point of view, neither should the doctor's outlook be purely medical. Each should fully appreciate the standpoint of the other, and in this way only can the full benefit be obtained from accounts.

Good Accounting is a Real Investment

In the olden days, those chosen to keep accounts in business institutions were not considered to have the same standing as those who were on the operating end. The progress of business affairs has, however, changed this, and the man who now has charge of the accounting end of a business concern is of a much more highly developed type of mentality. In past days this was not appreciated by business institutions. Accounting was looked on by all except the most discerning as a necessary evil, and it was considered that the less money that was thrown away on it the better. As a matter of fact, money spent on a properly efficient accounting system produces returns out of all proportion to the expenditure involved. I am glad to say that it is becoming increasingly evident that the value of the man on the accounts is being better recognized. It is surely a grave omission if finance is not considered as one of the chief factors in the successful development of business enterprise, and finance goes hand in hand with accounts. Not only in business enterprise, but in hospital affairs, be the hospital large or small, must the value of the man on the accounts be properly recognized. Don't let your accountant be a stenographer to take down the results of a post mortem on some expenditure. Let him cooperate in the making of expenditures. One example of the benefit which would accrue can be evidenced in the following example. When a certain capital expenditure is to be made the accountant examines the proposal with a view to ascertaining whether it is for one of three purposes: the purpose of saving money, for the general efficiency of the department concerned, a necessity from a humanitarian point of view.

Despite the funds being low, the accountant would then unhesitatingly recommend the expenditure if it fell under category one. If the funds were low he would demur if it fell under category two. If it fell under category three, he would take it up from a charitable standpoint, and have it financed from outside sources. As a result, the hospital finances would be greatly benefited, and the hospital efficiency inevitably increased. This is only one of hundreds of ways in which the man on the accounts can be of benefit to the hospital.

Just a word of warning is perhaps necessary. In standardizing the accounts do not forget the human element—the factor which as such does not appear on the books—your guest of honor, the patient.

JAMES WHITCOMB RILEY HOSPITAL

The legislature of Indiana has passed the bill authorizing the establishment of the James Whitcomb Riley Hospital for Children in the city of Indianapolis. The board of trustees is authorized to build and equip an institution to care for not less than 200 children, with offices, quarters for officers, nurses, and employees. The hospital will be a department of Indiana University, and will be under the control of the trustees of this University. The James Whitcomb Riley Memorial Association plans to raise funds to supplement the state appropriation, and according to present indications, sufficient funds will be available to enable work to be started on the first unit during the summer or fall. It is hoped that the hospital will be ready for opening on October 7, 1922, October 7 being the anniversary of the birth of James Whitcomb Riley. The Riley Committee expects that $1,000,000 will ultimately be raised for the buildings. With this new hospital on the same grounds as the new building of the Indiana University School for Medicine and connected with the Robert W. Long Hospital, the trustees feel that they will have a medical center worthy of attention throughout the country.

STOP-OVER ENABLES YOU TO PAY VISIT TO HOSPITALS

Routes to the American Hospital Association conference at West Baden in September will be through Chicago, Indianapolis, St. Louis, and Louisville, and the ordinary stop-over time limit of railroad tickets will permit as much time to see the hospitals in one of these cities as is ordinarily given for this purpose at any conference. The fact of meeting away from a hospital center does not, therefore, deprive the delegates of this important part of the trip.

A FEW GLIMPSES OF THE UNITED STATES HOSPITAL SHIP "RELIEF"

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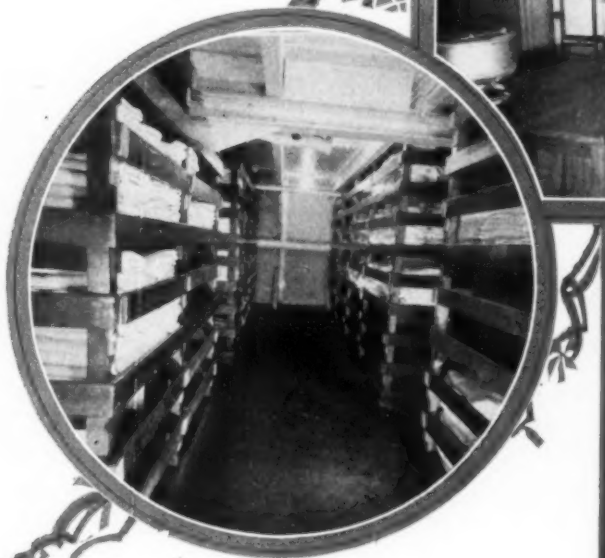
Nurses' state room

The Dispensary

The laboratory



The linen storeroom

The operating room

The MODERN HOSPITAL

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SUBSCRIPTION
Domestic postage, $3.00. Foreign postage, $3.50 (15 Shillings). Single copies, 35 cents. Annual Review Number, 50 cents.
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THE COMMUNITY HOSPITAL

THE community hospital is becoming a social, economic, and medical necessity, by reason of two forces which are working together. One is the hard road which is lengthening the individual's radius of action. The other is the disappearance of country rural practice.

The tendency is growing, among the sick, to seek the hospital when bedside attention is required. Otherwise, what we know by popular education about disease, diagnosis, and personal hygiene, combined with the office, dispensary, and telephone, renders unnecessary much of what used to be the regular routine of country practice. With good roads and automobiles at their disposal, the people of a very large area may now take advantage of a hospital which a few years ago served only the city or town in which it is located. It is as easy with good lines of communication for a hospital to extend its service over an area of fifty or seventy miles in radius, as it once was to meet the purely local needs.

The medical graduate will not go into the country. Rural practice is almost a thing of the past in many localities. Even the older men are abandoning it for the easier and more lucrative work in the cities. There is a shortage of doctors in general practice. The demands for the few are great enough to absorb them in the centers of population. The rural sections are being drained of their doctors and the graduates are not taking their places. They want to remain in the cities where practice is easier, fees are better, social and professional contact is possible, and hospital facilities are at hand.

The solution of the problem seems to be the community hospital, serving a county, or even a larger unit, built and maintained, perhaps, by direct taxation, and open to all the sick at fees that will meet the expense of its operation.

It need not be equipped for the specialties. These can usually be cared for in the private office and private practice.

If the hospital in the community is a private enterprise, and the only one, it should assume the responsibility that is plainly marked out, and serve that community to the full extent of its needs.

The stability of rural life, which is one of our serious economic problems, depends in part upon its ability to get the very best medical and surgical care and treatment.

WINNING THE PUBLIC INTEREST

THAT the hospitals of the country, particularly those lacking publicity programs of their own, stand in need of, and would welcome, a comprehensive, nation-wide plan of publicity, is evident from the interest that was so readily aroused in the celebration of "National Hospital Day," on May 12. To those who were active in promoting this idea, unstinted credit is due. It has served a useful purpose as an initial, though far from general, awakening of the public to the work and needs of our hospitals.

The hospital field, however, has so many ramifications, and plays such an important part in our social economy, that some of the leaders in the field seriously question whether the annual celebration of a National Hospital Day, at a time when special days are multiplying so rapidly, will adequately meet the publicity needs of our hospitals. Is not a more sustained and authoritative plan called for, a plan into the accomplishment of which can be mustered the united prestige and facilities of the great national hospital organizations, such as the American Hospital Association, the Hospital Library and Service Bureau, the Catholic Hospital Association, and the Protestant Hospital Association, working through and in cooperation with the American Conference on Hospital Service?

Sponsored by these organizations, there is no limit to the beneficial results that would accrue to our hospitals from a thoroughly matured and capably directed plan, which would place before

the public authoritative information as to the important services our hospitals are rendering, enlist the cooperation of public-spirited men and agencies in interpreting the hospitals to their communities, and give the public the opportunity to learn, at first hand, how the sick and injured are cared for and treated.

LEGISLATION IN THE NURSING PROFESSION

IN THE session of the Illinois General Assembly, two years ago, legislation on the subject of nursing was one of the hotly contested issues. Lobbies were present representing those who stood for very high educational qualifications and the three years course, and those who wanted the entrance requirements and the course reduced.

At this year's session of that assembly, now about to end, the nursing question has scarcely been mentioned. Certainly the change has not been produced by a solution of the nursing problem in the two years of elapsed time. On the contrary, the situation is more serious than it was then, and improvement is not in sight.

One of the largest and best equipped general hospitals in Illinois started its freshman class a few days ago with only seven pupils. Reports of similar indifference among young women towards the nursing profession come from every section of the country. A profession that has been almost deified, and whose financial returns and conditions of service have improved since the war, appears to be more neglected than ever.

Meanwhile the homemade nurse, taking a correspondence course, or six weeks' instruction of a superficial character, is increasing at a tremendous rate. According to reports, these nurses are able to secure as good salaries and as favorable conditions of employment as the registered nurse, though they are excluded from places where the certificate is recognized and demanded.

In the large cities, where most of these so-called practical nurses are employed, they find no difficulty in passing muster with a diploma signed by names that are known, and the term "graduate nurse" may be interchanged with "registered nurse" to the deception of the uninformed or ignorant. It is unlawful for a nurse to represent herself as registered when she is not, but there is no penalty for telling others that she is a "graduate" nurse, when she can prove it by showing a flashy certificate.

When the young woman, after six weeks of the most ordinary instruction, can get by as a "graduate," why should another work through the high school, and labor through a three years' nursing course, with its hard duties, long hours, and meager wage, to acquire no more substantial returns?

The condition is developing which is going to demand legislation to protect the public from nursing imposition, and safeguard those who have qualified for the degree of registered nurse. The plan which provides various grades of nurses, based on educational qualifications and character of service to be rendered, is growing in favor. In its simplest form it creates two classes of nurses, one very much higher than the other in preliminary requirements and technical training. It includes penalties which will prevent misrepresentation and fraud. To practice nursing for pay without license will become unlawful, but it may be possible to make a legal status for the so-called practical, home or graduate nurse.

Recently it has been suggested that a third grade of nurse be created, which would include the short course graduate, but would prevent her from acting in any more serious capacity than that of an attendant. Indeed, there is much sickness in the hospital and elsewhere which may be cared for by such an attendant, releasing the pupil and registered nurses for the more difficult subjects.

It is evident that the law must recognize in some manner the attendant, and the short course, or practical nurse, and prescribe where and how she may practice.

It has been possible to restrict the registered pharmacist to the channels for which he has been educated and licensed, though the temptation to practice medicine for medical fees, without doubt, is often very strong.

Nursing must sooner or later be recognized legally as a profession. The public must be protected from fraud and misrepresentation, and those licensed under the laws must be regulated and restricted to their respective fields.

ATTACKING OUR HOSPITAL SYSTEM

CRITICS of the government's care of sick and disabled ex-service men, in their efforts to wake up the authorities, are very seriously injuring the legitimate hospital system of this country.

It is not uncommon to hear men of high position denounce the hospitals in which ex-service men are quartered, as "unfit for habitation." The critics of the government never specify which hospitals they are speaking about, and the names of the unfit institutions do not appear. The accusation, therefore, seems to be aimed at all, it is so general and so sweeping that the public would be justified in believing, if it did not know better, that American hospitals are "unfit for habitation." If they are unfit places for the care and

treatment of military cases, then they are also unfit for civilian sick, and, if our hospitals are unfit for either class, our American public has been grievously deceived.

With the proposition that it is the duty of the Federal Government to furnish hospital facilities for all military sick and disabled, even to rehabilitation, no one will take issue. The care and treatment of ex-service men is a national function. The states should leave it alone. When they attempt to supplement or duplicate national efforts, they are only complicating matters. Our government is big and powerful enough to handle this proposition without the states' assistance, and it can do it just as expeditiously.

But this is off the road. In their demands that the Federal Government assume its responsibility, it is not necessary for the critics to libel and malign the hospitals of this country. Neither our general hospitals of a private character, nor our state hospitals under public administration, deserve the epithets hurled at them. Fortunately, the public knows better, and, for that reason, unfortunately does not give as much heed to the just demand that the government perform its duty.

Hospital facilities are limited, it is true. Hospitals, both state and private, are crowded. No better expression of confidence is possible than the fact that such public faith in our hospitals is growing faster than the funds with which to make expansion. The American hospitals are without equals in the world. In every activity in which they are supposed to participate they are meeting every expectation and justifying every hope.

We do not believe the American people endorse these attacks on the hospitals. It is our belief that they resent them. The end which these campaigns have in view is legitimate; but they will not succeed when falsehood is resorted to, or when an institution, which is so thoroughly established and so favorably known, is attacked with such malevolent tongues.

CONCERNING COLORED HOSPITAL WALLS

THE white hospital wall is doomed to go. It is cold, cheerless, negative. Man instinctively loves color. He loves it when he is well and he is benefited by it when he is sick. He is benefited by certain colors not simply because they create pleasurable sensations, but because they make for mental well-being and bodily health. The positive therapeutic value of color is becoming increasingly evident as we advance in our scientific knowledge of it, and in our skill in using it as a therapeutic agent.

In discussing this subject before the London Dermatological Society, Dr. Howard Kemp Prossord contended that in hospitals colors should be used which suggest to the mind spring, the time of life and recuperation—colors such as sunlight yellow, sunlight primrose, firmament blue, spring green, anemone mauve, and apple blossom pink. For the wall of a room occupied by neurasthenics, for example, he advocates sunlight yellow, firmament blue or light green, because of their curative power in cases of this type. Neurasthenia creates fear in man's mind. This being true, we must look for colors which will generate in the patient's mind strength and courage, colors that will give a strong mental and physical reaction, colors that suggest life.

In our own country one of the staunchest advocates of the use of color in the decoration of the hospital, for its therapeutic value as well as its pleasurable effects, is William O. Ludlow, whose article on "Color in the Hospital" appears on page 511 of this issue. While disclaiming any desire to advocate equipping, furnishing, and decorating hospitals like homes or hotels, Mr. Ludlow does advocate our getting away from the sterility of pure white, and adopting the use of such colors in decorating and furnishing "as will give warmth and quiet, and that gentle stimulation that helps the patient along the road to recovery."

If colors have a varying therapeutic value, hospital authorities should acquaint themselves with scientific progress along this line, and make a practical application of this knowledge in their own institutions. May it not be that the dazzling, cheerless whiteness of our hospital rooms is no mean element in keeping the sick, who should receive hospital treatment, away?

SEND IN YOUR SUGGESTIONS

THE request of Dr. L. R. Baldwin, president of the American Hospital Association, for suggestions regarding the program of the annual convention to be held this September at West Baden, Ind., should not go unheeded. Members who feel that certain subjects should be discussed, can contribute their share towards making the convention a success by sending their suggestions to Dr. Baldwin. The earlier the suggestions are mailed, the more time will he and his co-workers in charge of the program, have to consider them carefully, with a view to formulating a well rounded practical discussion.

The Association is to be commended for acting on the suggestion that at least one general evening session be devoted to an address by some one of national importance. This is bound to react favorably upon the Association in helping to make its work more generally known.

HOSPITAL CONVALESCENTS IN THEIR HOMES*

By MARY STRONG BURNS, R.N., Cleveland, Ohio

IN attempting this study, two things are very quickly apparent: (1) that convalescence is as much a state of mind as of body, and that environment which does not provide for the needs of both is inadequate; (2) that the background of convalescence is laid, the texture of it stretched and woven, while the patient is still lying abed in hospital. His mind is a sensitive shuttle threading with tireless insistence every impression of the hospital ward, whether, grave, radiant, trivial, or profound, and coloring each with his mood of the moment. In the "date of discharge" (when shall we find a more gracious phrase?) the patient takes this mental "sampler" and during the time that he must "remain inactive," as the house physician says, he wonders over it all. If left to himself, he makes few alterations in this plan of return to health which the hospital has spread out for his interpretative copying. Every impression is traced and retraced and his conception of health, and of his part in holding it, is framed in his idea of hospital service, and remains pictured as a never-to-be-forgotten experience.

In seeing over two hundred such "pictures" one could often exult that the hospital had been interpreted favorably and with gratitude. When the interpretation had been distorted through mutual distrust and misunderstanding, regret was always followed by the conviction that a broader conception of the hospital's responsibility was possible, indeed necessary, and that it would more and more make the way straight for patient and hospital alike. Two points of view will illustrate: (1) A Polish woman, after three weeks in a hospital ward, thus voiced her opinion on the Cleveland Hospital Bond Issue, "She is like a great and wonderful mother who cares for many sick children, this City Hospital. If more money she needs let us say yes and give." (2) A man sensitive at being temporarily without money bitterly resented the hospital's attitude that he should pay his bill there because he had hitherto paid his private doctor, "Why would they think I should go to that place if I could any longer pay a doctor? Would anyone go who did not have to? I burn with shame when I think what questions they ask."

Thus convalescence is the state of mind and body on which the hospital may set its stamp as a friend and helper, or as an autocrat without sympathy. The real service to the patient is but half done on the date of discharge. The test then comes, to decide whether the final stage of convalescence shall be to each of its patients a stimulating, worth while experience, or a lonely and difficult task to be faced against great odds.

The cases studied were two hundred discharged patients from four of the principal hospitals of Cleveland: Charity, City, Lakeside, and Mount Sinai. They were nearly all classified as free or part-pay patients. A few had apparently paid the full charge for treatment. They included a variety of foreign nationalities, of which Cleveland offers many: Armenian, Australian, Bohemian, Chinese, Greek, Italian, Lithuanian, Polish, Slovenian, Swedish, etc., and a number of native American whites and a fair proportion of negroes. The environment of patients seen ranged from that of wretched housing and extreme poverty to the completely comfortable house of the well to do.

The types of illness from which these patients were convalescing were contagious and general diseases, surgical operations, and accidents. There were also a few maternity cases. Their length of stay in hospital varied from five days to two months.

Half of the cases were seen within three to four days after discharge. The others were seen within ten days after discharge with the exception of six surgical cases who had been told not to resume work for four weeks.

In the homes the reaction of the hospital upon the patient was noted: (1) whether the diagnosis and medical advice had been understood, and was being followed with satisfactory results; (2) whether assistance of any sort would more certainly assure the result for which the hospital had worked. In a word, was the best sort of convalescence possible for that particular patient in that particular home?

The convalescents seen were classified as follows:

Cases with Home Environment—	Total Cases	Total Per Cent.		
1. Favorable and adequate	25	12.5		
2. Favorable with minor adjustments, economic or personal	71	35.5	59.5	87.5
3. Unfavorable but remediable by economic or other assistance	48	24.0		
4. Unfavorable and not remediable, needing institutional care in convalescent homes	44	22.0	28.0	
5. Acutely needing further hospital care—relapse after return from hospital	12	6.0		
	200	100.0%		

Thus, with only 12.5 per cent in surroundings favorable and adequate for convalescence, the remaining 87.5 per cent of these cases returned to homes which were unfit in varying degrees for their convalescence. With proper advice or assistance, conditions could have been remedied in about two-thirds of these cases (59.5 per cent of the total number), while with the other third (28 per cent of the total number) conditions were irremediable and the patients required institutional care in convalescent homes or still longer care in hospitals.

Even a superficial contact with the various types of lodgings, rooming houses, and rooming hotels, with their forlorn attempts at light housekeeping, brings swift conviction that they can never offer a fair chance to convalescents. The atmosphere of isolation, the indifference as to what happens to the lodger after he pays for his room, the long flights of stairs to be reckoned with whenever a meal is needed—these, aside from the unwholesome living conditions, proclaim the lodging system as "fatiguingly futile" for convalescent use. The patients themselves evidently realize this fact, and many did not return to their given address. Others had never lived at the given address, but had been known to the owner of the lodging house or to some of the lodgers. A few gave an impossible street number selected with evident care. The Salvation Army, the City Mission, a corner store, or a former saloon will sometimes be given as an address where nothing definite could be remembered of the patient. One man was found on the corner near the restaurant which he had given as his address and explained there was "generally someone round that corner who knew where he hung out." Such were the frail links to home and the greater reasons for convalescent care in institutions or at least for continued hospital supervision.

Another tremendous claim for convalescent supervision of the most far reaching and efficient sort was made by

*Reprinted in part from Cleveland Hospital and Health Survey Report, Volume X.

the fact that many other patients came from homes which were totally unfit for convalescence or continued health, unfit for the minimum requirements of normal living—on the edge of the dump, in gullies thick set with smoke, in leaky shacks, the cracks stuffed with newspaper and the room reeking with kerosene fumes, in dark tenements, four or five of which would open on a court filled with the accumulated refuse and garbage of the winter, where the convalescent child was left to "play."

To the patient with a problem waiting at home, institutional convalescence, however luxurious, has little charm —"For what good should I go away. The worry for the kids would go with me," said a mother amid a clutter of babies, washtubs, and general disorder. "This is the best for me here." Her peace of mind arose triumphant over the scene of distraction, for her problem was within her grasp.

Among the patients of all four groups were some who had been treated at two or more different hospitals for the same or different causes—the patient, not having mentioned this in giving her medical history at the hospital because she did not know, or "was not sure how to tell it," and thought "the next doctor would find out." In large families the hospital affiliation was widespread, several hospitals having been used by three or four members, and experience meetings, when all talked at once, brought out a variety of hospital lights and shades. This suggested the possibility of extending the scope of the Social Service Clearing House to include on its registry cards a note of any dispensary or hospital care which the patient had received, the technical details to be furnished by each medical agency as the occasion arose, as the patient is often unable to give an accurate account of past illness or surgical operations.

Patients Want Instruction

The very prevalent protest of the women patients against being kept in ignorance of the nature of their surgical operations deserves a word. The patient wants to know how she stands physically, even if she faces a serious handicap, and she can the better adjust herself to meet it if informed. The hospital service which shirks, evades, or refuses this after-treatment so necessary to the peace of mind and progress of convalescence has put the hardest part of the operation and its results on the patient, and has missed its best chance of rehabilitation.

The general feeling of these women was that they had had the benefit of wonderful surgery, but were no wiser than before the operation as to what had been the matter with them, or what was to be done to prevent further difficulty. The "head doctors" or attending surgeons were described with awe, yet regret, as "too important to be bothered"; "he's so busy he can't listen"; "it seems he's not the kind of a man to give you much talk."

A gynecological case returned to her home without instruction from the hospital, and within two weeks had house cleaned her tenement, painted furniture, papered two rooms, and was doing the cooking under a sloping ceiling too low to allow her to stand upright at the stove. The doctor having said she was "all right," she did not understand why she felt worse than before the operation. Concluding it was all a failure, she had begun treating herself with Lydia Pinkham's remedy because the newspapers said it would help anyone who felt as she did, and she didn't want to waste any more money on the hospital.

Of the women who were uninformed as to their condition only one had not asked to know. At seventy years of age she was tranquil and not inquisitive.

The men also had doubts. A neurasthenic, aggrieved at the little attention bestowed upon him at the hospital, had gone home to a combination of quack electrical treatments and doses of No. 99 at Doctor Simpson's Medical Institute. His protest was, "Why didn't the doctor say what would do me some good?"

Another impression noted among the women was remembering the fatigue of that first complete dressing to leave the hospital. Apparently this was often done without assistance, as the nurses had other duties and the friends of the patient were not allowed to come to the ward. An old negro woman with an aortic aneurism was sent home from the City Hospital on the ambulance stretcher. She described the fatigue of preparation and added, "The head lady nurse told them, 'Don't bother if it is a hospital gown—let her go while the spirit is in her.' I sure was grateful. She certainly had wisdom, that lady nurse."

Two other shadows of convalescence were: (1) the long uncertainty and final disappointment over the amount of the hospital bill, and (2) the fact that patients sometimes came away resentful because they had been the "interesting case" used to teach others. They felt that they were being detained in hospital for this purpose.

These may seem minor details in the immense and complex scheme of administration which the hospital must embrace, but with the sensitive imagination of one half sick, "behold, a little cloud ariseth" and the whole of his convalescent sky is darkened.

The amount of the bill could be approximately decided before the day of discharge, and preferably nearer the day of admission, so that this "indeterminate sentence" might be cleared up. If the patient has not been able to pay, it is perhaps not the happiest sort of *envoi* to have "the last one you see at the front door saying, 'I hope you will be able to work soon and pay your bill.'" Social service at the front door might perhaps have given the deft touch to incentive which would have brought the patient to say as much for himself, with gratitude and courage.

Still other types bespeak the follow-up work of the hospital. The drug addict, returning to lodgings with little moral support; the child with chorea celebrating her homecoming with a "regular meal" of coffee, sausage, and pie; the heart case who has spent most of his small life in hospitals and pleaded, "Oh, Muz, my business is always hospitals! Can't I stay home and get well?" the fourteen year old runaway with mumps whose pride had thus resented his being put in the "kids' ward" where his feet stuck out through the bed bars; the child of five whose mother had never been able to find out from the hospital what its illness had been—these and many others proclaimed their necessity for further care without which a large part of the hospital's work goes for naught.

Many hospital records were marked, under "instructions" "none in particular," which probably indicated that the case did not stand out in the mind of the doctor as needing any instructions other than those of routine convalescent care after pneumonia, a laparotomy, or whatever else the disease or operation might be. The patient, however, assuming this rôle for the first time, finds everything strange about being "a pneumonia" and things stranger still as "a laparotomy." He is full of interest in himself. He wants to make a success of getting well and there are many questions to which he wants to know the answers. He is hoping there will be time for one of the doctors to have a talk with him about it all before he leaves the hospital. But often the last day comes unexpectedly, his bed being needed for a more urgent case, and he finds himself at home, several miles from the hospital, wondering why he managed to find out so little

of what the hospital knew so well. When special instruction had been given the patient on discharge, the effect was almost magical. To have been instructed to carry on what the nurses have begun, to have responsibility for one's own treatment, gave a new zest and importance to convalescence.

Often the patient must either resign himself to a reduced "health bank account" or remonstrate at untoward conditions; again, the uncertainty as to what his depleted strength is equal to, makes any definite undertaking precarious. This is no time for platitudes in words or actions. No "return to dispensary" slip will fill the need. Advice to "rest and take it easy" will not answer. Reinstatement into the type of life to which the patient is equal must be wisely planned and the very present helps of community life pressed into service, so that the thrill of ambition, the impetus to new life which rightfully belong to convalescence may not be entirely lost.

Possible means by which the hospital may assist convalescence in the home are here suggested:

1. Treatment and instruction in hospital towards securing the patient's confidence and cooperation—the instruction to include understanding of present illness and means of preventing recurrence.

2. Making with the patient a definite plan for his aftercare and reinstatement into active life, and enlisting his best effort to carry out such a plan.

3. The function of the Social Service Clearing House might be broadened so as to include a record of dispensary and hospital treatment received by the patient, with names of institutions and dates. This record could be used by medical agencies concerned as occasion requires.

4. The function and value of the Convalescent Home, when suitable and available, should be explained to the patient as an opportunity.

5. Social service, if a convalescent home is not available or desirable, should create the same essential values of convalescence in the patient's own home.

6. Teaching the patient while most receptive to suggestions—because of recent contact with the hospital technic of sanitation—how he may further the hospital's work to insure permanent good health. This would include the use of dispensary and other hospital resources, as well as of the family physician.

A patient thus successfully involved becomes a valuable field agent who will set forth the work of the hospital in terms of appreciation which his neighborhood will not fail to understand.

CHICAGO SERVICE LEAGUE RESTORES HANDICAPPED TO INDUSTRY

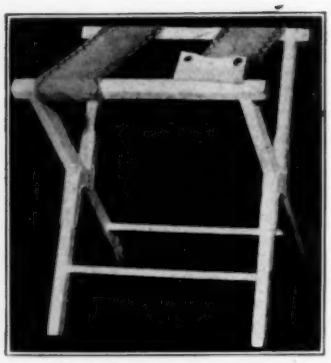
THE Service League for the Handicapped, in Chicago, is "organized effectively to reconstruct, re-educate, and re-train the handicapped from disease or accident, and to replace them in self-supporting positions." It is the object of the League to re-train the handicapped along the lines in which they were useful before they became handicapped, thus restoring to the community as much of the service and efficiency that belonged to it before, as it is possible to do. The mental effect of this method is also good, for it is more normal to go on doing as nearly as possible the same thing that one is used to doing than to have the new conditions emphasized by taking up a strange vocation.

Basket making is one of the chief industries of the training school.

The scope of the League is supposedly limited to Cook County, but sometimes cases are taken care of which are sent in from outside. There are 5,500 disabled persons in Cook County, that is, civilian disabled, with whom the League is concerned, the government, of course, having charge of the disabled ex-service men. That means that 2 per cent of the population is disabled, a proportion which is borne out by practically all the surveys on this subject which have been made. It is hard to realize that every year, through accidents in industry and elsewhere, as many cripples are created as the total of our disabled from the war, and there are three hundred thousand men who have been disabled in the war, now being re-educated by the government. What the disabled man, woman, or child, wants is not charity, no matter how well meant it may be, but a chance to work and be a real person again. This is the reason for one of the League's slogans, "Not charity, but a chance." The League is not an employment agency, its object is the re-education and re-training, and placing, of those in need of assistance.

The League has an executive board of fifteen members, a large medical board, whose services are free, and a director, who gives his full time to the work. The offices are at 15 East Washington Street, Chicago.

The applicants come to the League from many different sources, including the Red Cross, charitable organizations, and individuals. From one small notice in the paper a large number of people heard of the work and came in. Hospitals send people whom they are discharging unfit to return to industry in their present condition. There is no trouble in getting the people the difficulty at this time is in finding positions in which to place them after they are "got," and in collecting the funds to make the necessary wheels



This suitcase stand was made in the League training school, except the straps, which were done by home occupational cases.

go round. When the outlet has been increased it will be possible to increase the inlet of people to be cared for, through the hospital committee which now exists, and find the people needing attention before they leave the hospital. A number of the larger industries in and around the city have departments to care for the disabled, so they do not supply as large a proportion of the League's applicants as one might think. These departments, however, are not organized primarily to re-educate the handicapped, but to find them another position, usually a minor one, in the company. Some day the League hopes to combine all of this work of the industries in one office, thus saving a great deal of overhead to say nothing of putting the work on a better basis.

The minor industries which cannot afford to maintain such departments send many of their people to the League. The real problem before the League at present is to get in touch with the industries, so that the people will be sent to them, and so that they will be able to place people in positions best suited to them. The director is getting in touch with the industries through personal calls and through correspondence.

When a man comes into the League he is given a registration blank to fill out, giving the usual information concerning education, the cause of the handicap, treatment undergone, former employment, and references. He is then sent to one of the members of the medical board who are connected with various hospitals of the city, for a free medical examination. This diagnosis determines the man's classification. If he needs hospital treatment, or observation in a hospital for a time, he pays three dollars a day if he can afford it, if not, either the League pays it, or a free bed is secured. If the man needs re-education, he is put in the training school which the League maintains. If he can be placed immediately, and a suitable position is available, that is done.

The shop is carried on more from necessity than choice, the real idea of the League is re-education and placing of its people. Placing in such slack times as these is of course very hard. During the month of February only twenty out of 131 applicants could be placed.

There are several departments of the training school. One is brush making, another basketry, there was one in toy making but this was discontinued, as this industry offers a poor livelihood, and the object of the shop is to re-train the men for earning their living when they return

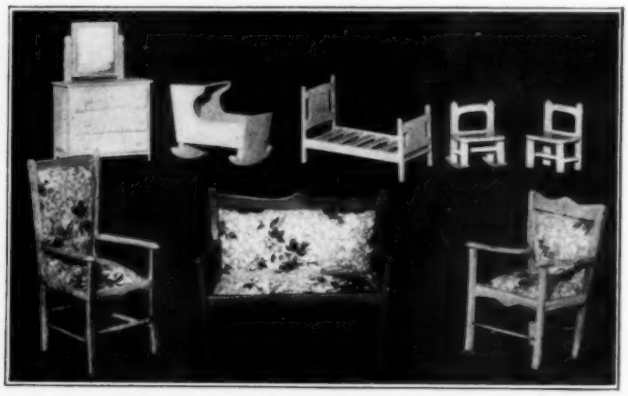
Five styles of brushes made by men in the League training school, also by home cases.

to competitive work. A rather new department is the one for lamp shade making. Two instructors are engaged here teaching ten or fifteen women to make beautiful shades, which sell for good prices, and which will be a remunerative occupation for them in the future. This connects up with one of the departments for the men, the making of luster ware. China is bought in large quantities and the men apply the luster and the china is baked three times. The lamp standards are made of this ware, and the electrical parts are also assembled in the shop. There was an exhibit of this very excellent work in one of the most prominent windows in the downtown district of Chicago during part of the month of March. Another department of the shop does typing, and the workers are paid two dollars a day. The rate for the rest of the workers is fifty dollars a month.

These are some of the baskets made in the school.

There are often thirty-five people employed in the shop and it is easy to see the expense which this entails. There are several instructors, one in rug weaving; one in fancy work; one in carpentry, brush making, and basket weaving; and two in the lamp shade department. One of the cripples is the foreman of each department.

The handicapped are classified according to the character of the position wanted: factory, store, business, mediocre (door tending, elevator man, etc.), and field (farm or outdoor work). The League has a list of 200 firms in Chicago and from this list an effort is made to pick out those most likely to have the desired position, and to place the applicant there.



Dolls' furniture made in the training school.

Some home work is done in connection with the shop, if the cripple is unable to leave home. The foreman of the department of brush making, for instance, will take a "brush kit" and go out and visit a boy who thinks he would like to make brushes. He spends part of a day teaching the boy, and leaves enough material to keep him busy for a couple of weeks. At the end of this time the brushes are collected and more material left. The League then sells these brushes and pays the boy for making them. A good worker can make about eight or nine brushes a day.

The League has orders for brushes, re-caning of chairs, baskets, etc., from different firms in the city. An effort is made to have orders ahead so that the workers can always be kept busy, and be sure of selling their products.

MOBILE DENTAL UNITS IN NASSAU COUNTY

By MARION WILLETTS BROWER, Chapter Chairman, Junior Red Cross, Mineola, N. Y.

IN REVIEWING the Nassau County Junior Red Cross dental project, carried on during the school year of 1919-1920, it is felt that a practical solution has been found for a national problem. The project was worked out in the following way. During the war, the Junior Red Cross had as its auxiliaries seventy-eight schools in the county, and the young members did remarkable work. When the greatest need for war relief was over, the school men in Nassau County suggested that the organization take up health work as a peace program. Nassau County has many villages and townships but no large city. The New York State Medical Inspection revealed alarming physical defects among the pupils in the country schools, the greatest trouble being the condition of the teeth. Ninety per cent of the twenty-five thousand children of Nassau County needed immediate attention, and it was decided that this was the angle from which to attack the health problem.

A dentist, Dr. Vincent T. Meaney, was engaged, and, on the day school opened, in September, 1919, Dr. Meaney began work in Roslyn. It had been decided that as it was so difficult to get the children to the local dentist, the Junior Red Cross dentist must go to the children. A Ford delivery car was bought and "Junior Red Cross Dental Education Car" painted on the side. A portable dental equipment was gotten together, a chair which required both the dentist and the janitor to carry it from the car to the building, instruments, and instrument case, foot engine, and sterilizers for the instruments. Before the work had fairly begun in Roslyn, requests had come from so many of the schools in the county that it was necessary to engage more dentists. At the end of the school year, six dentists were at work, two cars were owned by the Junior Red Cross, and one dentist was paid mileage for driving his own car. As the work progressed, an x-ray machine with a Coolidge tube was purchased and used very effectively. Some of the schools did not have electricity, but a small kerosene stove with a saucepan proved a fine substitute for the electric sterilizers.

The clerical work was made as simple as possible, and has not been changed. First each school is sent an application blank reading:

"Junior Red Cross
Mobile Dental Service

I hereby apply for the services of the Junior Red Cross dentists. I have approximately.....pupils needing dental work.

Signature of Principal.....
Name of School....."

When this is returned to the Red Cross Chapter House, a date is fixed on which the dentists will go to the school. On that day, a dental education car is sent out, usually with two dentists. As they examine each child, the defects are jotted down on a mouth chart. This is done in duplicate so that one chart may be retained by the chapter as a record, the other sent to the child's home, together with a consent card. They are worded as follows:

.....N. Y., 19....

TO THE PARENTS OF.....

Your child.....needs dental attention. This is the time to have the small cavities filled to prevent future loss of teeth. If you have a regular dentist, will you please take your child to have these cavities filled while most of them are small. If you have no regular dentist and wish them taken care of in school, at a cost charge, by the Junior Red Cross Dentist, please sign the attached card and return to the teacher.

.....
Principal. Nurse. Teacher.

Junior Red Cross,
Nassau County, N. Y.

TO THE JR. RED CROSS DENTIST:

You are hereby authorized to do any dental work for my child....., that you may deem necessary, said work to be done at a cost charge of $..... I agree to pay this in advance or upon completion of the work.

.....
Parent or Guardian.

Dated....., 19....

Usually after the noon hour of the first day, some signed consent cards and money are brought back, and the dental work begins. The fourth piece of paper work is the "day sheet." This is made out wherever possible, by the school or district nurse, and is a complete record of time used, children's names, work done, and money received or receivable, and is mailed by the dentist each day to the executive secretary at the chapter house. At the end of the time at which a dentist stays at a school, the executive secretary makes out, from the day sheets and the cash she has received, a complete statement of all work done and financial transactions, and sends it to the school to be countersigned by the principal.

The aim is to make the work self-supporting, in order that any school may feel that it can engage a dentist, and cover the amount of his salary as well as the cost of materials, by the money brought in, the school system, of course, purchasing and owning the equipment. The charges are based on the time and the materials used, and are as low as possible—for instance a prophylaxis costs fifty cents to seventy-five cents, a filling fifty cents to two dollars, and an extraction twenty-five cents to one dollar. If in the judgment of the principal or school nurse it is impossible for the child to pay, the Red Cross pays the bill, but the aim has been to prevent pauperizing—and in some cases the money has come in ten cents at a time, covering the entire school year. The Junior Red Cross, doing this as a demonstration, and on a county basis, had the added expense of educational pamphlets, transportation, and an executive secretary—together with all the original equipment.

Last year's budget, and how it was expended, is as follows:

STATEMENT—SEPT 1, 1919, TO JUNE 30, 1920.

(Original equipment)		
Car	$ 750.00	
X-ray and equipment	456.55	
Chairs and instruments	1,204.00	
Total		$ 2,410.55
Expenses and salaries		
Expenses:		
Transportation	$ 1,063.91	
Laundry	82.50	
Telephone and express	18.36	

Publicity	392.08	
Janitor service	12.00	
Accident case	60.19	
Repairs on equipment	24.93	
X-ray at Nassau Hospital	1.00	
Office supplies	13.85	
Trip to Cleveland	100.00	
Christmas	10.00	
Total		1,778.82
Supplies:		
Dental	$ 1,062.18	
X-ray	45.00	
Total		1,107.18
Salaries:		
Six dentists	$ 9,453.58	
One secretary	1,070.00	
Total		10,523.58
Total expenses, supplies, and salaries		$13,409.58
Fees received for service		
Sept. 1, 1919, to June 30, 1920	$ 9,055.34	$ 9,055.34
Statement of financial condition		
Total disbursements:		
Original equipment	$ 2,410.55	
Expenses and salaries	13,409.58	
Total		15,820.13
Value of equipment on hand	$ 2,410.55	
Value of supplies on hand	434.40	
Amount taken in	9,055.34	
Total		11,900.29
Deficit		$ 3,919.84
Estimate for next year		
Supplies and expenses	$ 3,000.00	
Salary of one oculist for one year	4,000.00	
Salaries of five dentists for ten mos. (10% increase)	11,000.00	
Salary of one dentist for one year (10% increase)	2,750.00	
Salary of one secretary for one year	1,560.00	
Total		$22,310.00
Estimated dental fees (with 10% increase)		10,176.45
Deficit		$12,133.55
Optical fees not estimated		.....

A summary of the work done by the Junior Red Cross mobile dental unit from September, 1919, to June, 1920, follows:

No. of schools worked in	40
Pupils receiving dental attention	2,591
Number of sittings	4,825
First molars extracted	853
Other extractions	2,100
Treatments	423
Prophylaxis	2,058
Fillings	8,707
Root fillings	69
Approximate hours of service rendered	3,114
Charge for work done	$9,545.30

This year an oculist has been added to the staff, and it is believed that his work will be as effective as the dentist's.

In summing up last winter's experimental work and this winter's program several points are observable. The solid month of heavy snow, with schools sometimes closed and roads impassable, was a great handicap. It is hoped that we may escape that this year. It was necessary in beginning this work to relieve pain and suffering and clean up great numbers of badly abscessed mouths. This year the aim will be to care first, for the children in the lowest grades in order to begin a systematic program of preventive work. Last year much time was given to educational work for the parents as well as the children. Blotters were distributed throughout the county with pictures and admonitions concerning the care of the six-year molar. Lectures with lantern slides were given to young and old, and articles on oral hygiene sent to all the local papers. As soon as work was completed the child was given a Junior Red Cross button, with the slogan printed on it, "Clean Teeth in Nassau County." This year the emphasis will all be put on preventive work. All the school principals will be urged to have tooth-brush drills. The dentists will stand ready to instruct the teachers in the best methods, to lecture to parent-teachers asociations, and anywhere they can reach the mothers, to try to make the clean mouth a habit of every child in the county. The 1920-1921 clean teeth button will not this year be given on the completion of the dentists' part of the work, but rather at the end of the school year, as a reward for not only having been to the dentist but also having helped the work along by the use of the tooth brush.

The success of this work is due to the people who are supporting the Red Cross and who make such work possible, and to the help and advice of the University of the State of New York, Dr. W. A. Howe, state medical inspector, and Dr. Wm. A. Leak, oral hygiene inspector, having taken a great personal interest. In the county this health work could never have been done without the moral support and actual work of the school superintendents, principals, medical inspectors, and school nurses. The local dentists have been very cordial, and have found that the educational work of the Junior Red Cross has filled their waiting rooms.

PATIENTS SHOW THEIR APPRECIATION

That the patients of Glen Lake Sanatorium, Hopkins, Minn., appreciate what the treatment in this institution has meant to them, is shown by the following letter which was sent to Governor J. O. Preus, of Minnesota:

We are sending you, by the bearer of this letter, a fountain pen which we would appreciate if you would use in the signing of the bill, allowing the issuance of one million dollars' worth of bonds to be used to enlarge Glen Lake Sanatorium for the tuberculous, thus making it a law.

When the pen has served this purpose, will you kindly send it to Mr. Otto Bradley, executive secretary of the Hennepin County Tuberculosis Association, Minneapolis, Minn., as an evidence of our deep appreciation of his efforts in working for the passage of this bill.

We, patients, have been greatly interested in the progress of this Sanatorium Bond Bill. We are in a position to know how much sanatorium treatment means to those of us who are struggling to recover from tuberculosis. This, also, makes us doubly anxious regarding those who are ill and outside of sanatoriums, thus being deprived of needed care and instruction, because of Glen Lake's limited capacity.

We are thankful for our chance to recover and become once more active, useful citizens, and know the dire need of those who are deprived of this opportunity.

We wish Mr. Bradley and you to know of our gratitude, and are trying in this small way to express it.

PROGRAM PRESENTS NEW FEATURES

Although it is too early as yet to give any details of the program of the conference of the American Hospital Association, a few announcements may be made. One or more evenings during the week will be given over to speakers of national reputation, on subjects interesting to hospital workers. There will be one new section, on dietetics. Miss Lulu Graves, professor of home economics at Cornell University, and honorary president of the American Dietetic Association, will be chairman of this section, which will no doubt be very practical and instructive. Two reports which will be of especial interest are the report of the special committee making a study of state subsidy for hospitals, and that of the special committee making a study of flooring materials for hospital use.

The section on hospital construction has decided to make the section this year a round table, so that superintendents and others may have the opportunity of presenting their special problems for discussion. As the best authorities in the country on hospital construction will be present, this is an opportunity which no one can afford to miss.

DR. WILEY E. WOODBURY JOINS DR. S. S. GOLDWATER

Dr. S. S. Goldwater, director of Mount Sinai Hospital, New York City, and consulting hospital expert to the City of Cleveland, announces that Dr. Wiley E. Woodbury, director of the Fifth Avenue Hospital, will hereafter be associated with him in his consultation work.

THERE ARE ELEPHANTS AND ELEPHANTS

TO FIND a use for things which have been relegated to the useless class is surely the work of genius, or a genie—which is what the White Elephant Rummage Shop, at 27 East Ohio Street, Chicago, really is. It takes something which the Jones do not want, and spirits it into the home of the Smiths, who have been longing for that very thing for months, but felt they really couldn't afford to buy it.

The Rummage Shop is carried on for the benefit of the Children's Memorial Hospital, in Chicago, all of whose one hundred seventy-five beds are free, and open to any child in Cook County, except those having contagious diseases, needing free hospital care. The annual income from invested funds of the hospital supports the work for only eight weeks, the balance for operating expenses must be obtained by voluntary contributions and the proceeds of the shop. That this balance is not small may be gathered from the fact that, in 1919, the hospital cared for 2,391 children in the wards, there were 33,613 consultations and treatments in the free dispensary, and 7,507 visits made to homes by nurses in the social service department.

The Maurice Porter and Agnes Wilson Memorial Buildings of the Children's Memorial Hospital.

The Rummage Shop has been at its present location for two years. It had its beginning in "rummage sales" held from time to time. These sales proved so successful that it was decided to establish a regular shop, run on a business basis. An old house was rented and the work began. Two paid workers were engaged, a custodian, and one saleswoman for the clothes department. For the rest, volunteers were depended upon, and they were organized into teams responsible for different days in the week. They did very well, but as anyone who has had experience with volunteer workers will tell you with a half sorrowful, half cynical glance of the eye, when the novelty wore off, the enthusiasm wore off with it. So the shop has five paid workers, four saleswomen, and an executive secretary. Volunteers still sell to some extent; the committee likes to have them, as it creates a good atmosphere. They also solicit stock.

When the shop started, stock was collected by automobile, people loaning their cars for the purpose. After six months a Ford truck was purchased, and a year later a larger truck was found advisable. With a picture of an elephant on the side, and the name of the shop in large letters, the truck is as good a means of publicity as it is of conveyance. Articles are sometimes delivered from the shop, in the case of automobile bodies and ice boxes, for example. A member of the committee gravely said that they did not solicit ice boxes, but no doubt they come in just the same. To keep the truck busy, it collects newspapers; they have been quite valuable during the soaring paper prices. But more than that, the trip serves as a good reminder that the shop is in existence, and will take anything which is offered. If people know that papers are to be called for on a certain day, it will be just as easy to put old neckties and magazines on top of the newspaper pile as in the waste basket. The shop scorns nothing.

The executive work is done by an executive committee of ten members, of which Miss Martha Wilson is the president. The committee meets faithfully every week and has a report from the executive secretary, and a classified statement of expense. Sales are recorded by a cash register and the money is banked every afternoon. It may seem to the uninitiated an easy kind of a business

One of the miscellaneous rooms at the shop. Perhaps the most popular sale is the one of "odds and ends," such as thread, buttons, etc.

The Treasure Room at the Rummage Shop has in it many veritable "treasures."

Looking over jewelry at the Rummage Shop.

to run—stock pouring in—laid out on tables—sold with no effort—and money handed over to the hospital. But none of these things is true. It is a very difficult business to run, to keep alive and alert a thing which might quickly die out if interest were not stimulated; to persuade people to take the trouble to give away the things they don't want; to price the heterogeneous articles which come in; to say nothing of keeping the financial end straight.

The solicitation of stock is done mainly in person. The members of the committee keep their eyes open for friends who are moving, house cleaning, or closing their homes for the summer. The exodus from the south to the north side of the city has been a gold mine of opportunity. Teas are sometimes held and people are invited to "come and bring a white elephant with you." Cards are sent out from time to time reminding the recipients that the shop exists, and that its truck will call for anything they may want to donate. "We can sell anything," truthfully says the card. A slogan of the shop is, "You may save the life of a child by giving us things you don't want." That kind of advertising must surely make some people stop and think, then make a trip to attic or basement. Leaflets about the shop and the hospital are another means of advertising, and of course, the name on the truck. The only paid ad in the newspapers is in the charity page of *The Post*. Mention is often made of the shop in other papers, and that helps along the publicity cause.

Pricing the various articles is a real problem. It is done by a "marking committee" which is divided so that some members meet two or three times a week. The pricing is done on the basis of experience; an article is "worth what it will bring." The members of the committee have become so expert in their line that they could go into your house and tell you in fifteen minutes just about what the contents of your living room would sell for. Things are remarkably low in price, sometimes much less than half the original cost, even when the article, as in the case of jewelry, opera glasses, silver, etc., is almost as good as new. Prices are not changed if the article is not sold immediately, unless it is something which will deteriorate. In that case it is marked down enough so that it is sold quickly. Saleswomen are not at liberty to change the price, so there is no bargaining over the counter.

Articles which come in are sold "as is" except in the case of hats. A hat trimming department has been maintained with a good deal of success.

At first, time payment was allowed as a special favor, but now it is strictly a business proposition. A 10 per cent deposit will hold the article, with the balance to be paid in ten days. After a certain number of days, if nothing is heard from the purchaser, a form slip goes out reminding him that the balance is overdue, and that all claim to the purchase will be relinquished unless he is heard from before a stated date.

On the first floor of the shop are books, furniture, men's clothes, and "miscellaneous," especially miscellaneous. Buttons, bedspreads, couches, neckties, golf sticks, magazines—from the frivolities of *Life* to the somber hues of the *Atlantic Monthly*—musical instruments, tennis net, baby carriage, and college banners. You have heard the saying, "Everything but the kitchen stove,"—well, even the kitchen stove is here, a large one, in the front room. The next room is given over mainly to books and furniture. Slightly dilapidated chairs lean with a weary air against the wall, and "Selections from Ovid" and lurid looking detective tales hobnob with "Trade Unions," which was selling at five cents. The art room is upstairs, and holds a remarkable collection of pictures, vases, and some lovely pieces of jewelry. The women's clothing department they say is very popular, also the millinery. There are hats of all descriptions, long shelves of them. You would not dare lay down a slightly worn but faithful hat, for fear of turning around and finding a "sold" sign on it. You hurry out of the room if you value your hat.

The Rummage Shop is run on the good will of the community—it could not exist without it, but neither would the good will exist if the shop were not a fine institution doing a good work and in a very worthy cause.

BUILDING COMMITTEE VISITS LIBRARY

The building committee of the Riley Memorial Hospital for Children, to be constructed in Indianapolis, Ind., spent several hours on April 23, at the Hospital Library and Service Bureau, studying the plans of the children's hospitals in its files, and securing other information on hospitals of this type.

The committee is composed of Mr. F. C. Ball, Muncie, Ind.; Mr. William C. Bobbs, Bobbs, Merrill and Company, Indianapolis, Ind.; Judge Batman, Bloomington, Ind.; Mr. Robert F. Daggett, Mr. James W. Fesler, Dr. L. C. Huesman, Mr. Hugh McK. Landon, Dr. Arthur McCullough, Dr. L. F. Page, and Mr. F. C. Schortmeier, all of Indianapolis.

While in Chicago the committee visited several of the principal children's hospitals of the city.

UNIVERSITY OFFERS NUTRITION COURSE

The University of Chicago is offering in its home economics department, two six weeks' courses for the training of nutrition workers with children. Assistant Professor Lydia J. Roberts will be in charge of the course, and Dr. Walter H. Hoffmann, instructor of pediatrics at Rush Medical College, will be the medical examiner. The two sessions will begin on June 21 and July 28, respectively.

OCCUPATIONAL THERAPISTS MEET

The Illinois Society of Occupational Therapists met in the room of the Hospital Library and Service Bureau, 22 East Ontario St., Chicago, on April 29. The society will hold its business meetings in the Library on the last Friday of every alternate month.

A POST WAR VIEW OF REHABILITATION OF DISABLED SOLDIERS IN GREAT BRITAIN

By DOUGLAS C. McMURTRIE, Secretary, Institute for Crippled and Disabled Men, New York City.

SINCE their inception, I had been familiar at long range with the provisions for rehabilitation of disabled British soldiers. Recently, however, during the course of a visit to England, I had the opportunity of conferring personally with a number of the national authorities responsible for the work, and of visiting some of the centers at which it is carried on.

The period of war electrification is over. The disabled soldier is no longer a seven-day wonder, and the work in his behalf has settled down to a steady routine grind. With the passing of the acute public interest I was surprised to note, however, that the character of the work had not suffered to any appreciable degree. The officials are still attacking their problems with vigor, constantly considering new methods of possible value, and changing tactics to meet new conditions.

If asked what feature of the British work was most impressive I should answer without hesitation, the humanity of the local war pensions committees. The second most noteworthy feature is the promptness with which their work is handled.

In London, for example, there is a central committee, and twenty or more sub-committees, each responsible for a district of limited size. The sub-committee is made up of citizens of the district serving as volunteers, and representative of labor, employers, and general public. The committee consults on individual cases coming before the office. The active work is performed by a paid staff directed by an executive secretary. The calibre of the members of these staffs is exceptionally fine.

The disabled man, discharged from the army, returns home, and presents himself at the nearest local pensions office. Unless his case presents some unusual difficulty, due to lack of records or serious conflict in medical testimony, he is examined, and a recommendation for award of pension is forwarded to the Pensions Ministry. If the soldier had to wait until his papers were acted upon at national headquarters, much hardship would ensue. But the signal advantage of the British system is that he does not have to wait. The local office is authorized to use its best judgment and start paying the man a provisional pension in cash beginning that week. It is then a matter of little concern as to when his papers return, though as a matter of fact they come through rather promptly.

Electrical workshop at Roehampton.

There is next observed another most intelligent arrangement. As soon as the pension is definitely fixed, the local office issues to the soldier a document known as a "ring paper," so designated because the back is covered with circles about an inch in diameter. The face of the paper certifies that the soldier is entitled to draw on a given day each week, at the postoffice nearest his home, a pension payment of stated amount. So each week, at the same interval and in the same manner as he would receive pay, he is handed his pension in cash by the postmaster, who places a dated postmark in one of the circles on the reverse of the ring paper. When all the circles are filled, the ex-soldier returns to the local committee for a new one. This requirement also serves to keep him in touch with the committee.

If an ex-soldier needs medical treatment, and hundreds of thousands of them require it intermittently, the arrangements are made by the local committee. If the treatment is extensive enough to interfere with regular employment he is put at once on a one hundred per cent disability pension, which is paid weekly in cash at the local office, beginning at once. His ring paper is taken up by the office and forwarded to pension headquarters. When the period of treatment is over and the man returns to his regular pension, the local office requests headquarters to return his ring paper directly to him and make it effective again from a stated date. There may be a delay in receiving it, but this makes no difference to the ex-soldier, because the local office will advance him weekly the amount of his pension, the advances to be returned by him when his ring paper arrives. The men know these advances can be deducted from future pensions, if not repaid, so they invariably reimburse the local office.

The point of giving this rather extended account of the pensions mechanism is to show the realization by the British authorities that essential routine and red tape inevitably occasion delays, but also show that insurance has been provided against the possibility of such delays causing hardship to the men. Think of the simplicity of the system: getting money weekly at the postoffice. Compare it with the plan of mailing compensation checks from one central office a thousand miles away.

One notices also that the interviewers in the local office take the initiative in helping a man to prove his case, and obtain a pension that is just. They do not assume the attitude of "prove your case if you can; we will pay you nothing until driven to it," which is unfortunately so common among pension administrations. If from their intimate personal knowledge of a man's case they realize an award is unfair, they zealously endeavor to get through for him a special grant, or they advise him to appeal, and help him to prepare his appeal papers. In other words, the workers in the local office humanize the official system, and do much toward promoting satisfaction and good

feeling among the ex-service men. The United States would do well, with reference to this feature, to take a leaf from the book of British experience.

It is of interest to note that all of the pension work in London, with a staff of over seven hundred, and an annual disbursement of funds in excess of fifty million dollars, is directed most capably by a woman, Mrs. Ethel Wood. As large a percentage of the staff as possible is made up of disabled ex-service men.

One of the most commendable provisions of the British pension law is the "alternative pension." If a disabled man can show that his normal pension plus his present earning capacity falls short of his pre-war earnings increased by 60 per cent, he can have the difference, up to a total of five pounds weekly, made up by an alternative pension. The 60 per cent added to the average rate of earning before the war is to allow in limited degree for the increase in the cost of living. This provision helps to minimize hardship in the cases of men with a standard of living higher than contemplated in fixing the general pension scale. The 60 per cent increment was supposed to allow for increase of living costs, but the most recent official figures show this increase to be nearer 130 per cent.

A concrete case would work out as follows: A man had average weekly earnings before the war of two pounds five shillings. Adding the 60 per cent to this gives three pounds twelve shillings. If the man can now earn but one pound twelve shillings, his alternative pension will be two pounds a week, to make up the difference.

A widow may likewise claim alternative pension up to two-thirds of her husband's pre-war earnings plus 60 per cent, this total not to exceed five pounds. This makes the limit of alternative pension to a widow three pounds six shillings eight pence, and anything up to this figure, as warranted by the record, may be paid entirely irrespective of her present earnings or income.

One class of men for whom a special procedure is required are known as Article IX cases. After the armistice the rumor was current that discharges would be obtained more quickly if no disability claim were made. It was only a rumor, but early return home was the only object of interest at the time, and many certified in writing that they were sound and well and suffered from no disability incurred in service. Though their medical record at discharge, therefore, shows no disability, this does not prejudice their claim to pension. They first produce reports on their health prior to and subsequent to the war. Opinion is then passed upon the case by the medical referee of the local pensions office, and if this is to the effect that he is entitled to pension, the medical officer from the central pensions office is called in to examine the ex-soldier. If this official concurs in the earlier opinion, the case goes to a special board for action, but, from the time his signature is put on the papers, the local office may begin paying provisional pension, giving the board as much time as it wishes for deliberation, without hardship to the disabled men.

Soldier with double amputation learning to be a telephone operator.

Another provision of the law is for so-called "civil liability" claims. When a man can show that he had a business which went to pieces because of his absence on war service, or that because of his disability he is going into a line of work in which he will need some capital or equipment to start satisfactorily, he may be given a grant of any sum up to $600. Many men are thus set up in business, but the results are not very successful, because a majority of the men lose the sum through unwisdom or inexperience, and in other cases the capital proves insufficient to swing their venture.

The problem Great Britain has had to meet in returning her disabled soldiers and sailors to civilian life has been staggering in its proportions. At the present time over one million men are drawing pensions of greater or lesser percentage, for disabilities incurred in the recent war.

Learning to be a laboratory attendant.

The responsibility for the interests of disabled ex-service men formerly rested entirely with the Ministry of Pensions, but recently the functions of training and placement have been transferred to the Ministry of Labour. There still remains with the Pensions Ministry, however, responsibility for award and payment of pensions and special grants, for medical treatment, and for provision for the varied incidental needs of the wounded men.

Having taken over from the War Office responsibility for all treatment of disabled soldiers, and as many of the men as are still in the invalid stage, it is necessary for the Pensions Ministry to maintain a chain of hospitals. Most of these hospitals were formerly military institutions. One of the most famous is now known as the Pensions Orthopedic Hospital, at Shepherd's Bush, in London. It accommodates seven hundred men, and provides all types of treatment. There are ample operative facilities, and provision for plaster work, hydrotherapy, electrotherapy, massage, medical gymnastics, and so forth.

Then there is a fine set of curative workshops which provide first, under occupational stimulus, exercise for stiffened and injured muscles, and second, helps to reawaken ambition in men who have become depressed by a stay of years under hospital treatment. The shops also accomplish a good deal vocationally in starting a man in a line which interests him, although the director complains that he cannot do much in this direction because the average stay is so short, not longer than four or five weeks. When the state of a man's health permits fairly regular attendance at the shops he is approaching the date of hospital discharge. The average attendance is about one hundred.

There is a remarkably wide range of occupations offered by the workshops. For example, the following classes are in progress: toy making, carpentry, upholstery, painting, shoe repairing, oxyacetylene welding, printing, lettering and sign writing, photography, hand and machine tool work, coach painting, and motor mechanics. Even if he leaves fairly soon, a man in the shoe repairing class will learn enough to care for the cobbling of his own family's shoes; the man in the upholstery class will not have to send his own furniture out for repair.

In such a hospital the chief emphasis is on treatment, and the workshops exist principally for curative ends. There is another type of man, however, who needs treat-

ment in a hospital, but who is strong enough to take training regularly at the same time. Treatment is a function of the Pensions Ministry but training is now a function of the Ministry of Labour. It has been arranged, therefore, that the pensions authorities should establish, to meet the need of this class of ex-service men, a chain of institutions known as "concurrent treatment and training centers." The one best known is at Epsom, just outside of London, and is designated as "Queen Mary's Convalescent Center." It has accommodation for one thousand men. Other similar institutions are located at Blackpool, capacity 1,000; at Birmingham, capacity 400; at Saltash (Plymouth), capacity 400; and a new one at Barry Docks, near Cardiff, Wales, capacity 300, has just been opened.

Practically all were formerly military camps; Epsom was a Canadian convalescent center.

At Epsom instruction is given in the following subjects: shoe making, brush making, cabinet making and joinery, vehicle building, painting, upholstery, electrical wiring, machine tool work, acetylene welding, chemical laboratory technique, horticulture, pig and poultry raising, drafting, and commercial subjects. The stay here is long enough to permit real vocational accomplishment in the shops. Many of the men come up to the point where they should be placed in employment or passed on to the training centers of the Ministry of Labour, but at this point, real difficulty arises. This difficulty, which concerns the trade unions and the saturation of the trades from the point of view of employment opportunity, is encountered in all training effort in England today. This difficulty will be discussed in detail later in the course of the present article.

Many thousands of disabled men have already been returned to civilian life, but as the work of the Ministry of Labour approaches its close the more difficult cases remain to be dealt with, and placement becomes infinitely harder with the progressively acute diminution of manufacturing activity, due to the restriction of buying occasioned by inordinately high price levels.

The Ministry is using two principal means of providing training for disabled soldiers. The first method is to send the men to existing trade schools which organize special classes exclusively for wounded ex-service men. This is very satisfactory for as many men as can be accommodated, but the facilities, numerically, fall far short of the demand. In London, for example, a large number of men have been trained at the Cordwainers' College, in Bethnal Green Road. Here there are classes in fine boot and shoe making, and in light leather work of several types. The courses average about twelve months in length.

Then there is a small but useful training shop organized by the Guild of Broiderers, in St. James Street. The shop is located on the second floor, but there is an elevator for the men to ride up in. Instruction is given in embroidery, but not of the conventional kind. The work is confined almost entirely to the embroidering of military and naval insignia for uniforms, and there appears to be steady employment available in this field. One of the conditions of establishment was that the shop, at the end of three years, is to belong to the men, in case they want to carry it on. The advantage of this occupation is that it can be followed by men disabled to almost any extent, provided they still have the use of their hands.

The number of men that can be taken into existing training institutions seems insignificant, however, compared with the demand. Some time ago there were 25,000 men on the list awaiting training; there are now 18,000 on register. The reason for this waiting list will soon be discussed, but the numbers will give some idea of the magnitude of the problem.

The ministry decided it would have to make plans for training on a large scale. It has established at various points throughout the United Kingdom, what it terms "instructional factories" for disabled men. These are shops operated under conditions very like those encountered in private manufacturing establishments. These training centers now have accommodation at any one time for 25,000 men, and this will soon be increased to 30,000.

The trades taught might be designated as the "standard trades," particularly those of the building industry. Machine tool work, plumbing, carpentry, bricklaying, plastering, and painting are among those registering the largest attendance. One reason for the selection is that these are trades in which large numbers of men are employed, and they are therefore easily more susceptible of absorbing the disabled men. Another reason is that building is far behind in Great Britain and it is thought that employment conditions in these lines will be good for several years to come.

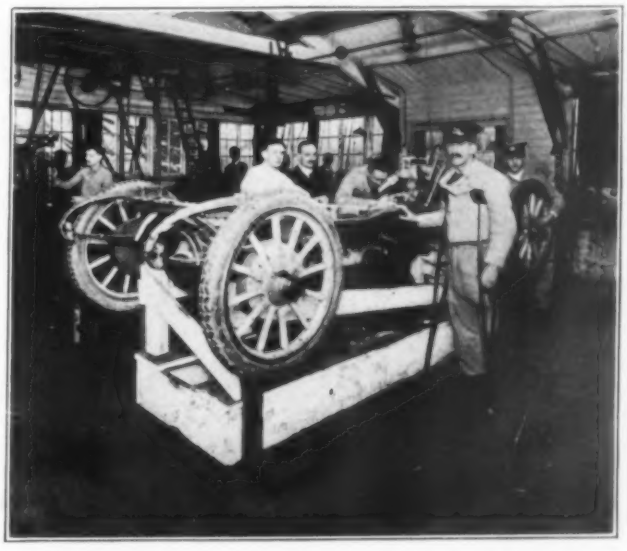
In these "instructional factories" the men not only learn the trade theoretically, but stay long enough to be speedy and adept producers.

When a man is placed in training he receives a training allowance of two pounds per week, with extra grants of ten shillings for a wife, eight shillings for his first child, seven shillings for his second child, and six shillings for each of all additional children. If he must leave his home to go into training he receives twenty-one shillings a week out of the two pounds; the balance of nineteen shillings and all the other allowances are paid to his wife.

For men living away from home, the Ministry of Labour maintains hotels, and makes up the deficit between the seven shillings six pence paid by the soldier and the actual cost of operation.

So much for the mechanism of training; we may now proceed to consider the vital problem in the British work.

Industry in Great Britain is very highly organized by the trade unions, to a much greater extent than in the United States, and almost every occupation is unionized. It was realized from the first that men trained for a trade would have no chance of getting employment unless the plan were approved by the union in that trade. It was also appreciated that, by the training of large numbers of men in certain lines, those trades might be overloaded from the point of view of employment opportunity.



Motor mechanism and engineering workshop at Roehampton.

The principle was therefore laid down that, for every trade in which it was proposed to undertake training, there should be organized national and local joint technical advisory committees, made up of an equal number of representatives of the employers and of the trade unions. The national committee would advise as to whether training for that trade were practicable, how long the courses should be, and, in general, how many disabled men could be absorbed. The local committees would approve or disapprove the fitness of individual candidates and control the number of men to be trained within the area of their jurisdiction.

This system has the advantage that, when a man enters training for a trade with the joint consent of employers and the union, he is practically assured of employment at the termination of his course. The disadvantage, very naturally, is that many men who could properly be trained for given trades are kept out of them or delayed to an undue extent by the action of the unions. The various unions have behaved very differently in their attitude toward the training of disabled men. A very few have taken the generous and patriotic attitude that the men who fought to protect the country and keep it fit to work in at all, should be taken care of, even at some sacrifice, and given every possible opportunity. The unions in the shoe and leather trades, for example, have taken this attitude and have been exceedingly helpful. Others have been just fair, and have agreed to absorb the disabled men who were formerly in their trade, together with a few additional. Still others have refused to have any disabled men, not formerly identified with their trade, trained for their occupation.

The explanation of this attitude, far from evincing a desire to be unjust to the disabled soldier, may be found rather to result from this chain of reasoning. It has taken the unions years to build up the present safeguards to their interests. One such protection is the limitation of numbers admitted to the trade. To allow the admission of a considerable number at the present time under special conditions would heighten the risk of unemployment in the future. Even if employment now were ample, and there is considerable unemployment, which bids fair to increase, the memory of desperate unemployment but a few years ago is still fresh. Such unemployment may come again. This would make for suffering on the part of the disabled men as well as of others now in the trade.

When the cause of delay in placing men in training is examined into, it will be found due, not to official obstruction or procrastination, but to the inability to get consent to their training from the joint technical advisory committees. One view of this is that it may be better to have some delay now than to train thousands of men and then be unable to get employment for them at the conclusion of their courses. But the situation is unfortunate.

In the blacksmith's shop at the Orthopedic Hospital at Shepherd's Bush.

Inasmuch as training is practically in trade union control, the effort is being made to find some subjects of instruction which do not bring about conflict with union interests. For example, it has been found that the so-called "handy man" about the farm is practically becoming extinct. So one of the instructional factories is training "handy men," preparing them to fix a plow, run a gas engine, repair harness, and so forth.

There is some opinion in England to the effect that the government acted unwisely in the first instance in putting itself completely within the power of labor unions. Such opinion holds that at the time when war interest was still high, the government should in effect have said to each union: "There are 600,000 disabled men to be refitted into employment. The quota for your trade is 1,250, and we will, therefore, train this number. Let us know now whether you will cooperate or oppose." The belief is that the force of public opinion would have precluded the possibility of any other course than cooperation. Then, again, it would have prevented the assumption of extra heavy burdens by willing unions while others passed the responsibility by. But this is only retrospective speculation.

The one group of unions whose attitude is of most importance at the present time is that of the building trades, because there is great demand for construction of homes, and it seems sure that there will be more than enough employment for many years to come. The government is asking, therefore, that 50,000 ex-service men, the fit as well as the disabled, be admitted to these trades. The unions, too, anticipate good employment for a considerable period, but they are asking some concrete guarantees to this effect, possibly in the form of special unemployment benefits, and arrangements for priority of present members as to employment if slack times ensue. The government is disposed to provide such guarantees, and negotiations are now in progress, with expectation of mutual agreement.

Placement of men with employers, with arrangement for their training, has not, on the whole, proved successful. It has seemed impracticable for a man to obtain really effective instruction under ordinary shop conditions, so this method has been almost abandoned.

Provision for the training and employment of disabled men is entrusted largely to the care of Sir Montague Barlow, parliamentary secretary of the Ministry of Pensions. I had two lengthy conferences with Sir Montague to discuss the present problems of the Ministry. In his opinion, provision was still to be made for a great class of men whose difficulties were not solved by any now existing facilities, namely, the men so handicapped as to be unemployable in the ordinary channels of industry. Within this classification would fall the epileptics, the mental cases, the chronic cases requiring treatment at frequent intervals, the debility cases incapable of a full day's work, and so forth. He believed there were 100,000 such men. The only possibility seemed the establishment of production shops under government auspices, providing employment under special conditions, paying the men a living wage and selling the products, so far as possible, in non-competitive fields, as, for example, to other government departments. This, it appears, will be the next extension of the British work.

NURSING AND THE HOSPITAL

Conducted by CAROLYN E. GRAY, R.N.,
132 E. 45th Street, New York City

THE FACULTY OF A SCHOOL OF NURSING

BY CLARIBEL A. WHEELER, R.N., PRINCIPAL, MOUNT SINAI HOSPITAL SCHOOL OF NURSING, CLEVELAND, OHIO.

MANY of us who live in the present period are prone to think of ourselves as being more advanced than the generations which have gone before us. For example: we consider ourselves great sanitarians and hygienists, but when we study the Vedas of the ancient Hindus who lived a thousand years B. C. we find that they bathed frequently, took excellent care of their teeth, and would not wear garments worn by others; we hear social workers speak of social service as a recent innovation, but when we read the life of Vincent de Paul, who lived in Paris two hundred years ago, we realize that he had a social vision of wonderful scope, and conducted organized forms of social service work. So also we think of our present forms of organization and administration as being unique and original. Such is not the case, however; we have only to study the principles of organization established by the nursing sisters of the middle ages in the large hospitals of that period, to appreciate the fact that we have inherited much from them.

Our modern system of administration of schools of nursing originated, it is true, in the Nightingale School, which was established in connection with St. Thomas hospital in London, in 1860. It was really an outgrowth of the old system of hospital nursing with several new and outstanding features, notably the change from the apprentice system to the educational system, which called for a staff qualified to teach as well as to supervise.

The Nightingale system, or the Bellevue system, as it has been called in this country, placed in the hands of the matron or superintendent, who must be a nurse, the control of the entire nursing staff, the selection, teaching, and discipline of the students. She was responsible to the superintendent of the hospital and the medical staff for the carrying out of regulations and orders for the care of the patients. She was appointed by the committee of the school of nursing and was responsible to them for the school. Although this system still prevails in a few of our schools, in the majority of them the principal or superintendent of nurses is appointed directly by the superintendent of the hospital, or by the board of trustees upon recommendation of the superintendent. The school, therefore, is considered a department of the hospital. As to whether this is the best method of administration of a school of nursing there is much controversy, but it is not my purpose to discuss it in this paper.

The number on the faculty of a school of nursing must necessarily depend upon the size of the hospital and the number of students enrolled. To set up any form of organization some standard of size must be taken as a basis upon which to work. Consequently, the duties as outlined in this article pertain to a school in connection with a hospital of at least one hundred beds. We must also keep in mind the fact that a dual organization is being described; a department responsible for the care of the sick in the hospital, and a school of nursing. The two are so closely interwoven that it is impossible to separate them.

The Principal

It would seem better always to use the term principal for the head of the school rather than that of superintendent of nurses, for she is not then confused with the superintendent of the hospital. She may be called principal of the school and directress of nurses, as in most institutions she serves in this dual capacity. The principal is responsible directly to the superintendent and in some cases to the committee of the school. Usually the committee serves in an advisory capacity and only matters of general policy are brought before it. It also gives assistance in making the social life of the students more attractive, in paying special attention to the students' living quarters and their recreation, and in helping to provide better teaching facilities.

The kind of relationship which exists between the principal and the superintendent is of vital importance to the school as well as to the hospital. In fact, upon this die is cast the fate of the school. If the superintendent is a man or woman of limited vision with a secondary interest in the school, the principal has a difficult path to tread and many discouraging moments are ahead of her. If, on the other hand, the superintendent is a hearty sympathizer with what she is trying to accomplish she has no better ally or co-worker, and she is in a position to carry out in a larger measure her plans for the development of the school. She must remember, however, that as the superintendent is responsible to the board of trustees for all the departments of the hospital, she should keep him informed of all matters of importance concerning the schools and the nursing service. She should consult with him in making any changes which effect the policies of either one. It seems to me that a principal working out of harmony with the superintendent, or with one upon whose support she could not depend, would find herself in an impossible position. On the other hand, a principal who cannot be a loyal supporter of the superintendent or the board of trustees has no business in the institution.

In a few hospitals where there is no assistant to the superintendent the principal is called upon to fill his place in his absence from the hospital.

Head Must Keep in Touch with Departments

The head of a school connected with a hospital has one of the most difficult positions in the hospital organization, because there are so many other departments closely allied with hers, departments with which she must keep in intimate contact and with which she must have the closest cooperation. There is the medical staff, the dietary, housekeeping, and engineering departments, the laundry, pharmacy, etc. Whereas formerly she had under her control several of these departments, they have now been taken out of her hands and are directly under the superintendent. She is absolutely dependent upon their cooperation for the efficient work of her own department. She therefore needs to be able to get the point of view of the other departments, as well as to make her point of view clear to them.

As stated before, the function of the principal is twofold. First, that of the administrator of a department, responsible for the nursing care of the patients; second, she is responsible for the selection and supervision of the personnel of that department. It seems that the principal should have the prerogative of selecting her staff of assistants, instructors, supervisors, and head nurses, with the privilege of dismissing them. She is also responsible for the selection, education, and conduct of the students in the school. She, with the approval of the superintendent and the school committee, must decide (in accordance with the state laws) upon the curriculum to be established. She must secure teachers and lecturers in all subjects to be taught. She must provide for the proper rotation of services for her students, to see that they shall have experience in each department and that they do not remain longer than their allotted time in any one service. She must pass upon the nursing technique established for the school; must be responsible for the home life of the student nurses, for their living quarters, recreation and general health. It is true that the details of these things are necessarily delegated to her assistants. To be efficient she can not afford to burden herself with details which can be carried out as well by others. It is necessary for her to make frequent rounds throughout the hospital for the purpose of inspection of the wards and to watch the student nurses at work, to visit the patients and inquire for their comfort and care, to solicit criticisms if there are such to be made. The occasional making of rounds with the different services is desirable as it makes her familiar with the problems concerning the work of the staff on the wards as well as nursing problems arising therefrom. She should attend lectures and classes given to students so that she may know the character of teaching being given by the instructors.

Frequent Conferences Desirable

It seems essential that the head of a school of nursing should keep in close touch with her students. This can be done in no better way than by having some class work with each group. To the first year students she can teach the history of nursing and ethics; to the junior class, ethics; and with the senior class she may hold conferences on professional problems, or meet with them for the discussion of current events.

It is highly desirable for the principal to have frequent conferences with her assistants, instructors, and head nurses. Such conferences should be held at stated intervals. The head nurses' conference should be held at least once a week, and should be attended by the principal and her assistants although it may be presided over by one of the head nurses. Such conferences are of inestimable value to all concerned.

Conferences with the superintendent and members of the medical staff in charge of the services are very helpful. In such a conference many difficulties and misunderstandings may be adjusted and suggestions made for the betterment of the service.

The woman who holds the position of principal of a school of nursing must be a person of broad vision and keen insight. This quality can not be developed by one who is unable to delegate work to others or who feels that it is necessary for her to see, personally, everything that is being done in the hospital and who never finds time for outside interests. Great demands upon her time are made by people seeking interviews, by those desiring positions, by those coming for counsel and advice, by members of her own staff and students. For all of these she must have time. She is constantly being called on for outside work connected with her profession. This outside contact not only gives a broadening influence to the individual, it brings that same influence to the student body, and reacts in a more widespread benefit to the community at large. It should be considered as much a part of her work as that done inside the hospital walls. For the same reasons she must keep in close touch with current events and must meet people outside her own profession. "All work and no play makes Jack a dull boy," consequently interspersed here and there must be frequent diversions, reading, music, theatre, and the things that give richness and color to life, for unless she continues to take in she will cease to give out to others. The same thing is just as necessary for her staff of assistants and instructors, and it is her duty to see that they have time for recreation and diversion.

Instructor in Sciences

In some of our schools the assistants to the principal combine both teaching and administrative work. While this method may have some advantages it seems to be more practicable to have their duties more clearly defined. One of the latest additions to the school staff is the instructor in sciences, a woman who has been especially prepared for teaching. The plan of having all subjects taught by the principal and her assistants has not proved satisfactory, and a person who has no other demands upon her than teaching must prove to be of greater benefit to the students and to the school. The instructor plans the class schedule, making out the main schedule the first of the year, including the whole year's work, giving each subject a stated number of hours and giving the dates for the beginning and ending of the courses. From this schedule she makes out her sub-schedules or weekly schedules, which have to be planned with due consideration for the ward work, the night nurses, etc. She sees that this schedule is posted, not only on the main bulletin board, but in every ward, for the use of the head nurses; she must also see that they are kept up to date. The head nurse thus knows how to arrange the "time off duty" for the pupils. The instructor sees that classes are run on scheduled hours, that they do not overlap and detain the students when they should be on the floor relieving some other students for their classes. She sees that lecturers keep their appointments and that each lecturer and instructor has a full outline of the subject material to be taught.

In a hospital where a librarian is not employed it falls to the instructor to take charge of the reference library,

to see that it is replenished and that new and reliable material is available on all subjects. She gives out the reference books and checks them in on their return.

The instructor usually keeps a record of class work. In this way she can see that each student has completed successfully the subjects required. She makes up the general averages at the end of the courses.

The principal duty of the instructor is to teach those subjects which have to do with the theory of nursing other than the active practical procedures. She usually carries anatomy and physiology, materia medica, chemistry, and often bacteriology. She attends lectures and has classes in nursing and other subjects. An instructor can carry too many subjects. Not more than from fifteen to eighteen hours per week of actual class work should be carried, otherwise she will not have sufficient time for proper preparation. Preparation for class work should be included in her working hours and not done during hours off duty.

Instructor in Nursing Procedures

In schools connected with hospitals of one hundred beds or more it takes the entire time of one instructor to teach the nursing procedures and the theory attending them. This person occupies a most important position, for upon her depends the kind of nursing technique which is to distinguish the students of the school. The demonstration room is used for this teaching, but it is necessary for the instructor to follow up the students' work on the wards to see that they are correctly carrying out the exact technique which has been taught in the class room. It is necessary that she do this, not only through the preliminary course, but through the entire first year of the students' course. She must work in close cooperation with the head nurses on the wards, keeping them informed of the technique being taught and any changes being made. She plans with the head nurses the duties to which the young nurses are to be assigned.

Where there are more than twenty-five students in a class the instructor may need some one to assist her in this work. Such a position offers a great opportunity for a young graduate who wishes to do teaching. With smaller classes, especially where the principal has only one assistant for administrative work, this instructor may relieve the assistant for time off duty. She can also have work assigned in the school office. She may be called upon to teach drugs and solutions or some other subject for which she is especially prepared. She also keeps the records of practical procedures, carefully checking them up to see that each student has not only seen the demonstration, but has demonstrated to her in return.

Assistants

The principal may have one or two assistants, according to the size of the school, whose duties are almost entirely administrative in character. The duties of such assistants vary in different hospitals. In some the assistants take over the supervision of certain departments, acting in the capacity of supervisors. In the majority of cases, however, the supervisors are distinct from the assistants. The assistant takes the place of the principal during her absence, taking charge of her interviews, and appointments. She makes daily rounds in the wards, visits the patients, inspects, observes the work of the students and works in close cooperation with the head nurses. Most schools keep a record of the inspections which are made in the various departments of the hospital. To her is assigned much of the detail work, such as the keeping of daily records, the calling of special nurses, the planning of the assignment of students to different departments, which is in itself no small task. She looks after sick nurses, inspects the students' uniforms and rooms, and attends to many other details too numerous to mention. The assistant may also carry one or two classes if necessary.

If more than one assistant is employed, the duties may be divided equally between them.

Night Assistant

The night assistant, or night supervisor as she is often called, holds a very important position and should be classed as an assistant to the head of the school. Her duties are administrative to a great extent, yet she has a definite teaching function as well. At night she takes the place of the head nurse, principal, and superintendent of the hospital, as all questions arising, with the exception of those directly concerning the medical service, have to be settled by her. In many instances she has under her supervision young nurses serving their first term of night duty, who need her counsel and advice. To such students she must give much time and thought. Frequent rounds are necessary to keep in close touch with all that is transpiring on the divisions. With her rests the responsibility of calling members of the house staff for serious cases and emergencies. In the smaller hospitals she directs the nurses' work in the emergency department, and sometimes has the supervision of the obstetrical service, which, unless very small, should have a special supervisor for night work. She is responsible for the conduct of the entire institution at night, to see that there is no unnecessary noise, no wasteful burning of electric lights. She must see that visitors leave the hospital at the proper hour, must account for her staff of nurses, ward helpers, orderlies, and even see that the night cook is on duty. If the cook fails to appear she may have to prepare the night supper, or provide someone from her own staff to do it. She may be called upon to relieve the night telephone operator for his midnight meal. It will be seen that she must be a very versatile person who can turn her hand to any task when the emergency arises.

Supervisors and Head Nurses

Supervisors and head nurses should be considered members of the faculty of a school of nursing. They should be carefully selected with this thought in mind. No matter how excellent the staff of assistants and instructors may be, if the head nurses are disinterested and incapable they can tear down more in a few weeks than can be built up in many months. In choosing nurses for this work they should, first, have had special experience in the branch for which they are engaged; second, they should possess teaching ability. A head nurse should be made to feel that her position is an important one, for it carries with it great responsibilities. She is in a great measure the person who is to bring either credit or discredit to the hospital and to the school. She must see that her patients are given good nursing care, that orders are carried out to the letter, that suitable diets are provided for her patients, that the social service department is notified of all cases needing help from that source. She must see that her ward is in perfect condition, that sufficient supplies are provided, that the equipment is kept up by a monthly inventory. She must render such reports as are required by her organization. She must necessarily spend considerable time in making rounds with members of the medical staff, must be able to give relatives and friends of patients information and a sympathetic understanding.

The duty of the head nurse to the students under her

direction is one which cannot be lightly estimated. She must cooperate with the other officers of the school in seeing that the students get as much as possible out of their training. She must see that the technique which has been taught in the class room is carried out on the ward, that there is proper correlation between the class room and the ward work. She should call to the attention of the students any symptoms or results of treatment which are of teaching value. She should help the students to work systematically, to plan work, and to be constantly on the alert for anything which they can learn. She must inspect the pupils' charts and give them assistance in making their case records.

The writer has, for several years, tried the experiment of giving the head nurses the teaching of nursing in the branch which they represent; for example: the head nurse of the children's ward attends the lectures given by the pediatrist and follows them in classes and quizzes. The supervisor of the obstetrical ward does the same thing, so do the head nurses of the medical wards. This gives the head nurse an added interest in her work and she is better able to assist the student with a correlation of her work on the division.

Organization in Smaller Hospitals

In smaller hospitals it is true that the nurse superintendent is often principal and sometimes instructor, as well as housekeeper and chief engineer. To expect so much of one woman even in a small hospital is to expect the superhuman. In the majority of institutions where the superintendent is also head of the school all the details of school administration are turned over to an assistant. This assistant may do some teaching, but a full time instructor should be employed to do the bulk of the teaching. Certainly no hospital is justified in conducting a school unless such an instructor can be furnished to teach the students. With such organizations the assistant must relieve the superintendent, and her duties are not clearly defined. If there are two assistants one should be assigned to administrative duties pertaining to the hospital, and the other to duties pertaining to the nursing department and to the school of nursing.

We must take into consideration the fact that no plan of organization was ever set up that would fit exactly several institutions, so it must be remembered that each school must work out the details of organization which will best serve its purpose, that is, the efficient care of the sick and the education of the students in the school.

TEACHERS COLLEGE TO HOLD INSTITUTE

An institute for state inspectors of nursing schools and nurse examiners is to be held at Teachers College, Columbia University, New York City, July 25 to 30, inclusive. This short series of lectures and conferences has been arranged by the department of nursing and health, for the women who are largely responsible for the supervision of nursing schools throughout the different states, and for the examination of candidates for registration. All nurses who are engaged in such work are invited to attend the institute without fee, and to take part in the discussions and conferences. Those who expect to attend are asked to register as soon as possible, by sending their names to the department of nursing and health.

There will be a series of daily lectures by educational specialists in other fields than nursing, and another series by nurses with wide experience in training school inspection. There will also be an informal conference every morning where all kinds of practical problems can be discussed in detail.

Those who attend the institute are invited to visit any other classes or lectures in the college during the other hours of the day.

The following is a tentative outline of the subjects which will be presented at the institute and the lecturers who will take part:

General Lectures—4:30 p. m.

July 25—By what machinery does the state organize and supervise its system of general education?—Professor Hillegas.

July 26—What are the essentials of a good system of vocational education?—Professor Snedden.

July 27—How can high school and other educational credentials be evaluated?—Professor Upton.

July 28—What is an educational survey for, and how are surveys made?—Professor Briggs.

July 29—What do we mean by supervision, and what is its educational value?—Professor Grace Day.

Lectures on Training School Inspection—11:30 a. m.

July 25—What is our goal in nursing education, and how may we hope to reach it? The part played by legislation, state inspection, and examination in the general scheme of nursing education.—Professor Annie W. Goodrich.

July 26—What is a good training school for nurses? Minimum essentials for the theoretical and practical training of nurses.—Professor Annie W. Goodrich.

July 27—What can be done to strengthen weak schools through cooperation and affiliation with other institutions?—Professor Annie W. Goodrich.

July 28—How to inspect a nursing school.—Miss Elizabeth Burgess.

July 29—Office organization and procedure for state inspectors—reports and records.—Miss Elizabeth Burgess.

July 30—State examinations, what are they for? What do they show? How can they be used to assist nursing schools?—Miss Elizabeth Burgess.

The following regular courses which are being given during the summer session will probably be of special interest to those attending the institute:

Education s173—Administration in Nursing Schools—9:30 a. m.—Professor Goodrich.

Education s171—The Curriculum in Nursing Schools—10:30 a. m.—Professor Stewart.

Education s170—Teaching of Nursing Principles and Methods—1:30 p. m.—Professor Stewart.

Those who wish to secure rooms in the vicinity of the college, should write to Mrs. Bliss, Room 305, Philosophy Hall, Columbia University.

WILL OPEN MEMORIAL HOSPITAL

The Lee Surgical Hospital, San Antonio, has been purchased by a company of physicians and business men, and after extensive remodelling will be opened as a memorial hospital to the late Dr. T. T. Jackson, and will be known as the Jackson Memorial Hospital. The alterations will include the addition of two operating rooms, a modern laboratory, and other new equipment. The training school will also be enlarged. Dr. Jackson, at the time of his death, was general surgeon for the Southern Pacific Railroad, and was president-elect of the state medical society. During the Spanish American War he served as surgeon to the American troops in the Philippine Islands. During the late war Dr. Jackson served as a major in the medical corps of the army.

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by LULU GRAVES,
Home Economics Bldg., Cornell University, Ithaca, N. Y.

SOME DIETETIC PROBLEMS OF INFANCY AND CHILDHOOD*

BY ROGER DENNETT, M.D., ASSISTANT PROFESSOR IN THE DISEASES OF CHILDREN, POST GRADUATE HOSPITAL, NEW YORK CITY

THERE is no question but that dietetics is taking a greater and greater place in the practice of medicine. Particularly in diseases of children, is dietetics going ahead faster than any other one topic. We find now that there is a maximum of dietetics and a minimum of medicine. That is the modern trend.

In one hundred histories of my patients, which I picked out at random, regardless of time or place, with patients ranging from a day old up to puberty, twelve years, I found that in every case, I had gone into the question of diet. In fifty-four of those one hundred cases, I had given no medicine whatever, and the other forty-six were dietetics and hygiene entirely. That shows the way the modern pediatrist is practicing medicine today, and that shows how we are expanding, and what we are coming to.

I feel that there is a great future for dietitians, they have hardly started yet, much of the work that is now done by doctors will some day be done by dietitians. That is a rather broad statement to make; doctors are very jealous people and they hate to have their profession taken away from them. But that is the future, I am sure. I feel that even without a medical training, dietitians with the proper training will be perfectly capable, under the supervision of a well-trained, well-informed physician, of doing a great deal of this work.

Women Start Doing Contagion Work

Not many years ago, the department of health put in trained nurses to do a great deal of their inspection work in their department of contagion. They found that a woman could go just as well and find out whether the patient was properly isolated or not, and whether the proper precautions were taken against contagion or not, post a notice on the door, and do other routine things. They found that even school inspection could be done by those who were not trained physicians, and had not devoted anywhere from four to twenty years of their lives to studying medicine. Another place where the physician has been superseded, perhaps, in in optometry. It was very unpopular at one time to think that anybody but a trained physician should fit people to glasses. Optometrists are doing it, and so far as I know, many of them are doing it successfully.

In the same way, I feel that dietitians will do a great deal of my work. The doctor with the gold-headed cane, the old man of mystery, who poured out a potion, did not tell anybody what it was—and most of the effect of it was because they did not know what it was—is a thing of the past. The doctor today must educate the people. It is said that knowledge is in the hands of a few. That is not so; knowledge is being widely spread, and dietitians are among those who can spread it best. We must educate the people. One of my particular pet statements to my students is, "Look out—the layman is going to be better educated than you." For mother takes the *Ladies' Home Journal*, and the *Woman's Home Companion*, she has a dozen baby books on her shelf by Dr. Hall, Dr. Griffith, Dr. Dennett, and others. As a result, sometimes she knows a great deal about dietetics and children. The physician who has busied himself so much with medicine is going to be behind the times, therefore he must and is informing himself on questions of dietetics.

Dietetics Important in Infant Feeding

No doubt many dietitians, and I might say all of them, if they were sufficiently interested, could make good infant feeders. Infant feeding is one of the best examples of the curative value of food. We save lives time after time, thousands of them, by giving the proper food. If dietitians were permitted—and I feel sure they will be some day—to take our courses in infant feeding in the medical schools, they might feed a baby just as well as I or as any of my colleagues, after they had had this preliminary training, and the experience.

Another question in which everybody in medicine, particularly in pediatrics, and all dietitians, are interested, is that of malnutrition. These children in our schools who are under-nourished are incapable of doing their work in school. They are incapable of progressing mentally and growing mentally because they have not grown physically, and as they grow up they become the drones, perhaps, rather than the workers. They are never great successes, in many instances because of the poor start that they had physically, during their early years, and that is all due to the question of diet. I feel that a great deal can be done, and much is being done by dietitians throughout this country, to raise the general standard of health of children. That will tell in the future.

*Read at the third annual meeting of the American Dietetic Association, New York City, October 25-27, 1920.

Perhaps most of this work should be done in conjunction with expert medical aid, because we must pick out the children who have heart disease, or tonsils, or adenoids, or poor teeth, and that sort of thing, which perhaps would require expert medical aid, but the chief part is done and should be done by dietitians.

Scurvy Cured Almost Over Night

There are many things in diseases of children that are interesting us. I am speaking now of the curative value of foods. Consider the question of scurvy. The infant, perhaps a few months of age, who has developed bleeding gums, has loosened teeth, whose long bones are swollen, and at times and in extreme cases even paralyzed, who are having hemorrhages underneath the skin, and the various other symptoms that go along with scurvy, these infants can be cured almost over night by the administration of orange juice. I say almost over night, because literally the next day after the administration of a proper amount of orange juice, they are astonishingly better. Often in three or four days they are entirely well, and the rule is that after a week, except in the most desperate cases, all of the symptoms have disappeared. I had one child, in particular, who came down from Canada in plaster casts, brought in a clothes basket, because the slightest motion on the train would give that child intense pain, and he howled with pain if anybody came near the examining table. We made a diagnosis of scurvy, and gave orange juice, threw away the casts, and also the clothes basket. Inside of three days the child was perfectly well. It was a complete, almost miraculous cure, simply by the administration of orange juice.

Now, we are all tremendously interested in knowing why orange juice cures scurvy. Why does it? I am getting by the place where I am simply interested in names and words and terms. I don't care if you have new words. This new word, vitamin, that is getting terribly stale now, is just a word. Who knows what a fat-soluble A vitamin is, or a water soluble B vitamin? Nobody. It is just another word like our old word "enzyme." Enzyme is a very mysterious thing to this day. I remember in my early medical education twenty-two years ago, that they talked just as much about enzymes as they do about vitamins today.

Salts in Orange Juice Cure Scruvy

We can all guess at what these vitamins are. We can all guess at what cures scurvy, and why orange juice cures scurvy. My guess is that it is the salts, the minerals, the citrates, in orange juice which are the curative agency, and that scurvy is a nutritional disorder brought about by the absence of, or imperfect assimilation of certain salts. We all know that rickets is brought about by the failure to assimilate and utilize calcium and other minerals. I believe that within a very short time we will find just what salts they are, and what salts will cure scurvy. I believe that we will discover what these substances called vitamins are. And I believe that many of them are also salts and mineral matter, but that is only my belief, and doctors are not supposed nowadays to tell what they believe; they are supposed to tell and show what they have proved, and proved beyond the question of a doubt.

When I think of various things that prevent the decay of teeth, it almost includes the whole question of dietetics in children. The food, of course, must be properly balanced. There is no question but that there must be the proper quantity of minerals, and of fats, carbohydrates, and proteins. But there are other elements besides that. I had under my care a family of Swedish children. There were six or seven of them of all ages and they had the most splendid teeth, there was not a damaged spot in any one of them and they had been here in this country a long while. Our foreign element often has beautiful teeth when they come here, but how quickly the teeth of those brought up in this country will decay and go to pieces! On inquiring into their diet, I found that they had a very well balanced diet, but also that they all liked and had used this Swedish bread that is just as hard as a rock. I believe that aside from the improper quantities of the respective elements, and aside from the questions of indigestion, the use of the teeth is the most important thing in their preservation and development.

Fruit Especially Good for Children

In some of the other problems that we have to deal with day after day, for instance, the problem of constipation in children, almost invariably they will respond to the proper diet. Time after time if they are given the proper amount of vegetable matter, particularly the proper quantity of raw fruit, the constipation is overcome with the greatest ease. I don't think that once out of one hundred cases or more have I given a cathartic to any of my patients.

Children like fruit. They are particularly fond of raw fruit, and my usual routine is an apple or an orange, or pears, peaches, and plums, in season, before breakfast, just as soon as they awaken. Then we give them some sort of cooked fruit with their breakfast, a baked apple, or some prunes. We all have this terrible notion that the only thing that will cure constipation is prunes, but I cannot make my children eat things that I personally have a distaste for. In the middle of the day I have them eat another pear, peach, or apple, or any other fruit, and I seldom see a child that won't eat some more raw or cooked fruit several times during the day. That is our routine, and with it we almost invariably cure these stubborn cases of constipation in the children.

Diarrhea is a diseased condition which is cured dietetically. In the summer time, when diarrhea takes off hundreds and thousands of children throughout the city and country, with the proper knowledge of infant feeding, and the proper knowledge of dietetics in older children, they can be cured, unless, of course, they are overwhelmed by infection.

To go into the question of the curative effect of foods in diarrhea is rather too long a topic to take up here, but perhaps many of you are at least interested in the theory of foods in this disease. Theoretically, there is in the normal intestinal canal a flora of bacteria, known as an intestinal flora. In certain types of diarrhea we find that the bacteria causing it live on carbohydrates—on fermentable food—and that is called the fermentative diarrhea. In other types we find those bacteria that thrive upon protein foods, and this is called the putrefactive diarrhea. How easy it is theoretically to cure these cases of diarrhea by giving the proper food. A child that has a fermentative diarrhea may be cured by being given a protein diet, a milk diet, the theory being that the fermentative bacteria will be starved out and the diarrhea subsequently cured. On the other hand, in our putrefactive diarrhea, if we give a carbohydrate diet, sugars and starches, the putrefactive diarrhea will be cured.

There is another question in conjunction with the diet in children, and that is the fact that changes take place in cooking of various foods, particularly in the case of milk. Some of us believe that boiled milk is more effective than raw milk in certain instances, particularly in clearing up an intestinal indigestion. Going a step

further, there has recently developed a lot of work with dried milk, an extension of the process of the boiling. These questions of why boiled milk and dried milk are more effective than raw milk have to deal with the salts, I believe, because, although I won't go into it too deeply, I think the salts in milk are changed by this cooking process.

It may be interesting to know what foods we pediatrists think do the most harm among children, and also those which do the most good among children. Not that these foods that I am to mention are harmful in themselves, not that they should be discarded in the diet; but improperly used, what are the foods that do the most harm?

Foods That Do the Most Harm

Perhaps in the order of their importance, I would say that the four foods that were capable of doing the most harm are sugar, butter, soft breads, and meat. Sugar is a very necessary food, but it is easily fermentable, and because of its high concentration, it is more difficult to digest than a good many other foods. A child's tendency is to eat sugar, and the more he gets the more he wants. So my rather unique way of getting around the excessive sugar in my diets for children is not to allow them any sugar, and then they get more than they should have. There are always plenty of kind relatives, and the grandmother, or the nurse, or the mother, mixing a little sugar in the breakfast anyway. In most of my diets I leave sugar entirely out of the dietary, for my own reasons. In the first place, they don't like food without sugar on it at all, and after a time all cereals taste alike after they are sweetened. They don't learn to like the taste of oatmeal, or one cereal or another, because of the different tastes that they have, and finally they sicken of all of them. Then I say they get large quantities which tend to frequent attacks of indigestion, vomiting, and what not. So I find that by stopping sugar altogether I often do the best thing for the child.

In the malnutrition cases I cut butter out of the diet altogether, as well as sugar. I know it is taught in many of our malnutrition schools that in order to get the caloric value in twenty-four hours they should have a great deal of butter. But children who are not very well, whose stomachs are upset, and who are having gastric disturbances, are the children who will eat more and eat better, and digest the other kinds of food if the butter is left out altogether. I can put on weight tremendously on a very badly nourished child by putting it to bed, and keeping it on a milk and cereal, bread and fruit diet, only for a time of course. That is, in the most desperate cases of malnutrition and in some of my worst or youngest cases, I often cut out even the cream of the milk itself, giving a diet of cereals, skimmed milk, breadstuffs, and fruits—cooked fruits generally.

Prohibits Use of Soft Bread

I need not say much to you about soft breads, for probably all of you serve them. Soft breads are more or less of an American habit anyway. The Southerner has plenty of hot bread every meal, and the New Yorker has soggy bread that comes from his baker every morning, and he puts that into the stomachs of his children. You will find that it is almost impossible to get anything but the soft, more or less undone bread. In every one of my dietaries at all ages, I prohibit the use of soft bread. I have bread at least four days old, dried out, or I have it dried out in the oven, and give the hard variety of bread. In my experience I have found over and over again that I cannot treat these children successfully, I cannot stop their recurring disturbances, I cannot make them put on weight, and thrive, and do all the things that they come to me to do, without this one change in diet.

Finally there is the question of meat. We pediatrists rather scorned Dr. Rose for the stand that she took on meats, but I think that I personally am gradually coming around to her viewpoint. Those of you who have taken Dr. Rose's course at Columbia, particularly her summer course, will realize that this is a concession, but I think that she has been right. I feel that we do overdo the question of meats. I think the protein can be well supplied in our other protein foods and that our children are far better off without too much meat. I seldom give meats nowadays before three or four years of age. Some years ago I gave it at eighteen months, but I have gradually raised my age limit.

Foods That Do the Most Good

As to the foods that do the most good, of course, first we have to put milk. Everybody always does. The second would be vegetables. Third would be our cereals, and breadstuffs fourth if you want to put it so, that is, practically cereals and breadstuffs. Recently one of our most eminent authorities in research has said that he felt that people could very nicely live on milk and vegetables alone, and that without the green vegetables and without milk the diet is not complete.

There is just one other thing. I feel sure there is a little tendency toward overcarefulness in diet among the mothers I come in contact with. They have four or five books written by baby specialists and have consulted first one and then another. One of them says not to eat meat, and the other says that vegetables often cause intestinal indigestion. And so when they come to feeding their babies and children, they have taken out all of the different foods and have not anything to give them. This gives you the poor, malnourished child that has been so carefully fed that it has no flesh on its bones.

Now, there is that class of mothers, and it is quite a numerous class among the fairly well-to-do people. There is no question in my mind that if you don't give the stomach anything to do, it will deteriorate, just as when you don't give the teeth anything to do they decay. There is no question in my mind that a child's digestion must be, as I often express it, rather unscientifically, "educated." The child who has its food mashed up for it through a strainer during infancy and childhood until it grows up to be six or seven years of age, in the first place, will not like coarse foods, and in the second place, the digestive apparatus has never been stimulated to work. There are some mothers who will say, "Look at little Jimmy Jones. His mother lets him have everything, and he never has his stomach upset. He has lobsters and watermelon all in one meal, and a green banana on top of that, and it does not hurt him a bit." Well, I think there is more or less truth in that, although that is not good dietetics to preach. We must give our children some food that will make their stomachs work. I think one of the reasons for malnutrition among the better classes is this question of light suppers. We have told mothers so long that children should not have a hearty night meal, that they have limited them, giving perhaps just cereals and milk till the child detests the sight of a cereal; and then it comes down to milk with a little apple sauce. Such children, even at a fairly early age, I put on a hearty supper. I give them potatoes, starchy foods, rice and macaroni perhaps, with meat gravies on them to make them taste better, and even an egg at night and custard puddings. That is just the one meal that they

missed. They ate a fairly good breakfast and noonday meal, but when it came at night there was nothing at all given to them that was palatable, and that just lowered the number of calories that they received in twenty-four hours, so that they refused to gain weight.

NEWS ITEMS

Miss Ellen Gladwin of Jefferson Hospital, Philadelphia, enjoyed a short trip to Bermuda early in April.

Miss J. Katherine Haupt has been transferred from the United States Public Health Service Hospital No. 47, Markleton, Pa., to Buffalo, N. Y., care of the United States Public Health Service.

The Chicago Dietetic Association met on March 18, at the Hospital Library and Service Bureau room, 22 East Ontario Street. The social part of the program consisted of a trip through the new Drake Hotel under the direction of Mr. Tyler. The next meeting will be held on April 15. Miss Florence Nesbitt of the United Charities will speak.

Dr. August Widmer, chief of staff of the Val-Mont-Switzerland Sanitarium, spent several weeks in this country visiting people and institutions interested in dietotherapy. This sanitarium in near Lake Geneva, and is devoted largely to the treatment of diseases of metabolism. Dr. Widmer was accompanied by Dr. Turin, one of his staff doctors.

The regular monthly meeting of the New York Association of Dietitians was held at the Central Y. W. C. A. building, April 13, 1921. Miss Winifred Gibbs of the Borden Laboratory told of the work done in these laboratories and of the plan outlined by the company to be of service in treating malnutrition. Mrs. Mary DeGarmo Bryan, president of the American Dietetic Association, told of the plans for the Association for the coming year.

Miss Effie Winger, formerly of Cottage Hospital, Santa Barbara, Cal., has accepted the position of chief dietitian in the Swedish Hospital, Seattle, Wash. Upon Miss Winger's departure from Cottage Hospital, Miss Florence Smith was asked to assume responsibility for the entire dietary department of the general hospital. Miss Smith had been in charge of the Memorial Metabolic Clinic which is a part of this hospital. Because of the efficient work done in the clinic, the hospital authorities were glad to give her the larger field for service. Many of our readers knew Miss Smith at Presbyterian Hospital, Chicago.

At the regular meeting of the Home Economics Association of Philadelphia, the program, which was arranged by the dietitian's section of the Association, included the following papers: "Nutrition Problems," by Miss Anna L. DePlanter, in charge of the nutrition work at The Child Federation of Philadelphia; "Occupational Therapy for Medical and Surgical Patients," by Miss Ida F. Sands, director of occupational therapy of the Philadelphia General Hospital; "Occupational Therapy among Mental Patients," by Miss Mabel A. Bond, director of occupational therapy at Philadelphia Hospital for the Insane.

Occupational therapy is a recent departure of the public health department carried on under the direction of Dr. C. Lincoln Furbush, director of public health of Philadelphia.

Miss DePlanter's paper will be published in the July issue of THE MODERN HOSPITAL. Following are brief extracts of the other papers.

Miss Sands said in part: "When we offer work to some of the poor sick people, they refuse, saying, 'We are not here to work.' They remind me of an epitaph placed upon the tombstone of a woman who had struggled with poverty before her death, which read:

'Don't weep for me now,
Don't weep for me never,
I'm going to do nothing
For ever and ever.'

But the results justify the work, for after learning to knit, sew, or weave, if they are able, we find that the patient is more contented and improves in health. Many crafts are taught, as book binding, rug weaving, metal work, wood carving, basket making and tin toy making. Among these employments some are sure to appeal to the patients as well as prove possible in their condition.

"With four assistants, one a trained therapist, about three hundred patients are reached during a month. In our hospital the senior nurses are required to take an eighteen-hour course in occupational therapy, that they may have a better appreciation of the work and be able to assist on the wards at times.

"During the past year several chronic patients have been helped to better health and placed on the payroll, through the assistance given them in the workshops. Besides the help given these special cases, occupational therapy has been found to bring at least four decided benefits to the patients and hospital: (1) Through pleasant employment the attitude of mind is changed and the morale in the wards is greatly improved; (2) The stay of the patients is shortened because of improved health; (3) Many are taught some useful employment, some become self-supporting, thus lessening pauperism; (4) The hospital received during last year, 30,000 articles from this department manufactured by the patients. This included many garments, and linen for hospital use, as sheets, towels, etc."

Some of the points in Miss Bond's paper are given here: "On August 1, 1920, I received my appointment to organize a department of occupational therapy for the mentally defective women of Philadelphia Hospital for Mental Diseases. This is unusual in a hospital of this kind, but none the less greatly needed. Under Dr. Furbush, the director of public health, we hope to do a great deal for the insane poor of Philadelphia through this department. The men patients are given help through occupation at Byberry City Farms.

"An attractive pavilion was opened for use as a craft shop, and on August 23 the first class was started. From three in number, it soon increased to a large class. Ward patients are given attention, destructive patients being given burlap bags to ravel. These threads are wound by others and when dyed are woven into rugs. The work given the patients is carefully planned as to use, design, color, and material. This helps to make the article useful and saleable. During the past year the patients have made many different articles, as reed baskets, woven table runners and bags, embroidered linen pieces and dyed scarfs, sweaters and scarfs (knit), slippers, capes, and socks, woven rugs, and raffia baskets—157 articles.

"At present we have enrolled sixty-six women, thirty-six of whom work in the shop. Those given parole since August, when the work began, number twenty-four.

"The aim of occupational therapy is to heal through work. To this end we endeavor to gain the interest of the patient, interest in their personal appearance, environment, and in the problems of life.

"Through the cordial cooperation of the physician in charge we hope to do much to benefit the patients who are constantly being assigned to the class. Through clinical records, filed weekly for each patient, we can see encouraging progress in the class."

HOSPITAL EQUIPMENT AND OPERATION

With Special Reference to Laundry, Kitchen and Housekeeping Problems

Conducted by FRANK E. CHAPMAN, Superintendent
Mt. Sinai Hospital, Cleveland, Ohio

THE MARKET'S TREND

BY CHARLES L. HAYS, CHICAGO, ILL.

BUSINESS has turned the corner and there are signs of revival in a number of important branches of industry. Naturally the change for the better has come first, in the lines that were affected earliest by the slump in prices, and in which deflation has been most thorough. The leather business is a case in point. Tanneries are now operating almost at capacity, the demand for their product has quickened, and calfskins, which recently were selling at thirteen cents, have risen to twenty-three cents, while the hide trade is in a more healthy condition than it has been for nearly a year. Automobile makers have increased production, and the demand for cars shows improvement, although it is not yet strong. Textile mills are more active, and the movement of staple cottons and woolens shows an increase, stimulated by the fact that supplies in some important lines are running low. The trend of prices has been lower for the last month, but markets are now steadier. Merchants, however, still cling to the policy of buying in small quantities and often, avoiding distant commitments in most cases.

Money conditions are easier and interest rates are declining. The Federal reserve banks of New York and Chicago have reduced their rediscount rates on commercial paper from 7 per cent to 6½, the first change in nearly a year, and the rate on commercial paper has been lowered from 7¾ or 8 per cent a month ago to a range of 7 to 7½ per cent. The easing of the financial situation is much more noticeable in the East than in the West, liquidation being rather advanced there, but the wave of improvement is moving westward.

Crop Outlook Encouraging

An excellent crop outlook is one of the strongest factors in the business situation. While prices of farm products have declined to the lowest levels in seven years, producers seem to have abandoned the attempt to check the economic tide by withholding commodities from market, are selling freely and putting in a larger acreage this season to offset by increased effort, as much as possible of the loss sustained through lower prices. The government forecasts a winter wheat crop of 629,000,000 bushels, against an estimate of 621,000,000 bushels on April 1, and a harvest of 577,000,000 bushels last year.

Wholesale commodity prices on May 1 averaged 4.4 per cent lower than on April 1, as shown in Dun's index. All the groups of commodities making up the index show declines, the sharpest being in the case of meats, which declined 11.2 per cent and now stand only 11 per cent above the average in 1913. The 4.4 per cent decline during April compares with 4.1 per cent during March and 2.1 per cent during February.

This is a more favorable showing than that made in the last figures given out by the Department of Labor, which cover the month from February 15 to March 15 and show an average decline of 1 per cent in the retail cost of food. Fourteen of the forty-three articles dealt with in this index showed increases, as follows: cabbage, 17 per cent; granulated sugar, 9 per cent; pork chops, 8 per cent; sirloin steak, round steak, rib roast, chuck roast, butter and cheese, 2 per cent; plate beef, ham, lamb, hens, and bananas, 1 per cent. Decreases were recorded as follows: eggs, 13 per cent; rice and prunes, 7 per cent; lard, 5 per cent; oleomargarine, corn meal, potatoes, and oranges, 4 per cent; onions and canned tomatoes, 3 per cent; flour, rolled oats, navy beans, and canned corn, 2 per cent; canned salmon, fresh milk, evaporated milk, bread, macaroni, baked beans, canned peas, tea, coffee, and raisins, 1 per cent.

Since these figures were compiled, there have been further important declines, butter being down to thirty cents in the wholesale markets, eggs to twenty-two cents and sugar to six and a half cents. Potatoes are fifteen to twenty cents lower than a month ago, at seventy to eighty-five cents a bushel. The mild spring has brought much fresh produce into market earlier than usual and this has had a weakening effect on prices generally.

Unemployment Increased

The month has brought about a considerable increase in the number of unemployed as a result of strikes and walkouts. Only in the building trades, however, have the results been serious. Construction work is almost at a standstill in Chicago, where it is estimated that 16,000 have been made idle by the lockout, but in other cities of the Central West there is moderate activity. With steel prices stabilized by a reduction of $8 to $10 a ton by the principal producer, with brick off 25 per cent at $12 to $14 a thousand, and substantial reductions in lumber and other supplies, the opinion seems to be gaining ground that materials are about as low as they are likely to be for some years, and only the labor situation stands in the way of a resumption of activity. It is hoped that the present clash will lead to the breaking up of the tripartite combination of labor unions, contractors, and material dealers, and independent action in all branches

of the industry; but assurance of this is by no means strong, and in any event the costly delay probably will make it impossible to accomplish much this year toward relieving the acute housing shortage.

The seasonal demand, although much less than usual, has been sufficient to cause pronounced strengthening of the markets for paints and paint materials. Linseed oil is back to sixty-seven cents after declining to as low as sixty-one cents, and turpentine also has had a considerable advance to eighty-two cents. In both cases a better export demand has contributed to the rise.

Household furnishings are still moving slowly, high prices and the small amount of new building acting as deterrents. Staple cottons for bedding have been further reduced, but the market for these has strengthened somewhat because of increased demand, particularly for well known branded goods. Blankets also are more moderately priced, in line with the movement in almost all manufactures of cotton and wool. Outings are lower, but a strong popular demand for ginghams and percales keeps these materials firm.

Few Changes in Drugs

Drugs and chemicals are rather inactive and without important price changes. Quinin is steady at sixty-six to sixty-eight cents for Java, and seventy cents for domestic, with a fair inquiry for small quantities. Formaldehyd is easy, sales being reported at fourteen and a half cents a pound. Codliver oil is slightly lower, but dull at the decline. There is evidence of keener competition among dealers, but the effect has been confined mostly to the market's tone and is not reflected in actual transactions.

There has been some improvement in the demand for coal, and this is reflected in greater transportation and mining activity; but the placing of orders is still far behind the volume usual at this time of year, and this fact has prompted warnings by leaders in the fuel industry of a famine next winter unless more consumers provide for their needs in advance. Statistics of mining operations seem to give some color to this forecast. According to the reports of the United States Geological Survey there have been produced since the first of the year only about 115,258,000 tons of bituminous coal. Last year at this time the production had aggregated 153,553,000 tons, and even with that output the public had considerable difficulty in obtaining its supplies in the winter, and had to pay excessive prices for much fuel. Withholding of orders evidently is based on the hope that prices will go lower, but with mine output held down to current sales, and the chance that industrial requirements are more likely to increase than to diminish, it is doubtful if these expectations can be realized. Best informed operators and dealers, however, avoid predictions as to prices.

The effect of unemployment is noticeable in a further decrease in savings accounts. The change is slight, and is nearly offset by the gain in some localities where there has been industrial revival. Purchasing power of the public does not seem to be greatly lessened, as judged from the turnover of retail merchants, which compares favorably with that of the corresponding time last year. Investment demand is very good, and recent issues have found a fair market, industrial securities yielding around 7½ per cent, and railroad and utility bonds at 6¾ to 7, some of the latter having behind them exceptional security, and running as long as fifteen years.

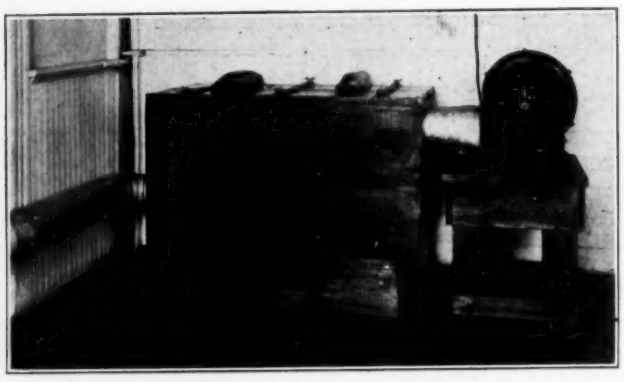
DUST AND POSTOPERATIVE TETANUS IN HOSPITALS

By A. WAYNE CLARK and GUSTAVE S. MATH EY, Research Laboratory, Johnson and Johnson, New Brunswick, N. J.

IT HAS come within our experience several times during the past few years to assist the surgical staff and bacteriologists of hospitals, in an endeavor to determine the source of postoperative tetanus infections.

The matter is a very serious one, and in a responsible, high-class hospital is so regarded. There is nothing that produces a worse condition of worry, chagrin, and almost panic among the staff, than this occurrence after several clean operations.

Commonly a hurry call is sent for the scrub woman and



Rotary blower and air filtering box. The box contains two screen-covered frames about eighteen by thirty-six inches, placed in its center. Between the frames is a layer of cotton. The air from the blower enters above the cotton and the outlet is below.

for the bacteriologist. Everything used in the operating room is suspected. Unfortunately for the bacteriologist, in his endeavor to determine with positiveness the source of infection, a general scrubbing up of the premises is the first move. This is entirely justified and is the correct procedure, but the chances are large that it will wipe out hope of definitely placing the source of infection. The efficiency of the sterilizer is checked up, catgut is suspected and examination of it begun, and all the hand and glove sterilization methods are given careful scrutiny and bacteriological test.

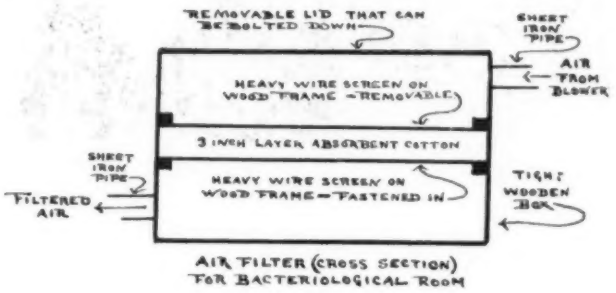
Unfamiliar with Sources of Infection

All surgeons are familiar with the ordinary sources of pus infection, but with these tetanus cases they are more or less unfamiliar. Probably most surgeons go through their entire operative experience without a single case of postoperative tetanus.

As we will attempt to show here, however, there is no excuse for thinking that these infections will not occur, even though a thousand successive operations have been free from them. This is written, therefore, in an endeavor to point out this ever present danger, to indicate a possible source of infection, and to suggest means for reducing it to the minimum. It will perhaps be worth while for us to outline here in clear form the bacteriological principles involved.

Most surgical infections are due to the pus-organisms.

The human skin is their habitat. Hence cleansing of the patient's skin, the use of iodine or other antiseptics on the skin, the cleansing of the operator's hands and covering them with sterilized rubber gloves, are necessary precautions. The skin being always moist, there is almost no danger from particles falling from it in the form of


REMOVABLE LID THAT CAN BE BOLTED DOWN
SHEET IRON PIPE
AIR FROM BLOWER
HEAVY WIRE SCREEN ON WOOD FRAME—REMOVABLE
3 INCH LAYER ABSORBENT COTTON
SHEET IRON PIPE
FILTERED AIR
HEAVY WIRE SCREEN ON WOOD FRAME—FASTENED IN
TIGHT WOODEN BOX
AIR FILTER (CROSS SECTION) FOR BACTERIOLOGICAL ROOM

Detail cross-section plan of cotton air-filtering box, showing construction.

dust. The usual way in which the pus-organisms come into the wound, therefore, is by direct contact with the skin, i. e., rubbing off the surface. The pus-organisms also may be carried from the skin into the tissues by using a knife in cutting through the skin, and then using the same instrument in the underlying tissues. All surgeons are familiar with these conditions.

Of course, pus-organisms can be carried as dust, but that is not usually an important factor. An additional reason for this is that the class of organisms that include the pus-producers—the cocci—die very quickly when dried and exposed to air and light.

The tetanus bacillus, however, is of a different order. It forms spores and these are extremely resistant to heat and chemicals, and are not at all harmed by drying. These spores can live for years in the dry state and are blown about as dust.

The habitat of the tetanus bacillus is the earth or soil, and in some places is extremely common therein. Tetanus spores are also found on vegetables, tubers, and fruits, and through these they may be transported from districts where tetanus may be most prevalent to those where it is less prevalent. Around stables and manure in general it is common, probably this is due to the animals having been fed on grain and hay from fields with tetanus-infected soil. It can be readily appreciated that from such infected feed the tetanus spore might pass through the intestinal tract and appear in the feces.

Dust Easily Reaches Operating Room

No one needs to be told that soil itself and particles of manure are constantly carried right into hospitals on everyone's feet. It is self-evident, therefore, that tetanus can reach the operating room of almost any hospital as dust, blown about in the hospitals or through the windows, and therefore that dust prevention in hospitals is an impotrant consideration. We think it is of much more importance than it is generally considered. If anyone doubts the importance of the dust question, let him stand in a room almost anywhere, with bright sunlight streaming in at a window, and look through the beam of light toward a black or dark object beyond. Swirls of dust following every passer-by will almost surely be seen. Many of these dust particles are carrying bacteria—some are quite likely tetanus. That being the case, is there any reason why they shouldn't get into the operating room and into the wound?

Just how frequently tetanus does gain access to operative wounds, is difficult to judge. As a matter of fact, these organisms may not infrequently be present undetected, for the reason that tetanus is one of those peculiar organisms, called anaërobes, which can grow or multiply only in the absence of air, that is to say of oxygen. In culture work in the laboratory it is necessary to heat the culture broth so as to drive out any dissolved oxygen and to place on its surface, after cooling, a layer of liquid paraffin to keep out the air. Tetanus will grow under these conditions, but not at all in the usual tube plugged with a cotton stopper.

It has been authoritatively stated that tetanus cultures injected directly into the blood stream fail to cause the disease, for the reason that the organism is unable to multiply because of the oxygen in the blood. Such being the case, it can readily be appreciated that only certain conditions in a wound can be favorable for the development of tetanus. There must be a restricted blood supply and air must be excluded. This of course is a not uncommon condition.

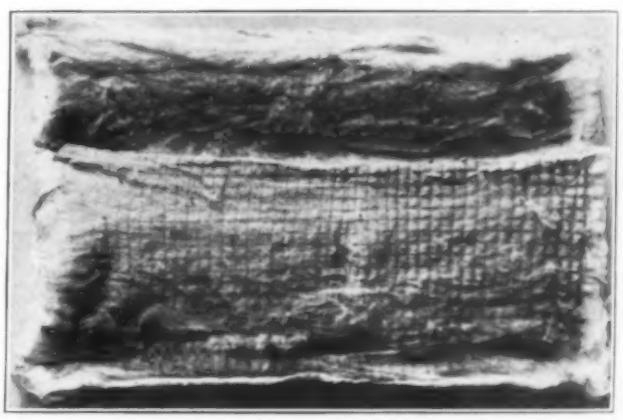
Under proper conditions tetanus will grow when another organism that is strongly aërobic, accompanies it. This other organism then takes up oxygen so rapidly that it protects the tetanus from its effects. Such a condition is quite possible in a wound.

In our laboratory work, in the testing of enormous numbers of samples of dressings and ligatures, we are constantly encountering this general subject of air-borne bacteria. We have given the subject close attention for many years and have provided ourselves with special equipment to protect against such bacteria being carried into our bacteriological work-room. We are intensely interested in this subject and believe our experiences and our suggestions will be received in an understanding way by hospital authorities.

There are some features of this equipment which are applicable to hospital operating rooms and some that may not be, or are only indirectly so.

Complete freedom from dust is plainly impossible, but to reduce it to the smallest possible amount is, we believe, well worth the careful consideration of hospital authorities.

Just how to go about this is the question. Almost anyone can make some simple helpful suggestions. Every housekeeper knows, for instance, that dust accumulates on the tops of shelves and other objects in a room. An accumulation of such dust, if caught in a draft of air, is blown about. One simple remedy for this is to avoid as much as possible, in a room, all objects that have exposed upper surfaces. This will suggest to anyone to avoid



Upper side of layer of absorbent cotton removed from air-filter supplying bacteriological workroom, after somewhat more than one hundred hours of use. The black specks are flies.

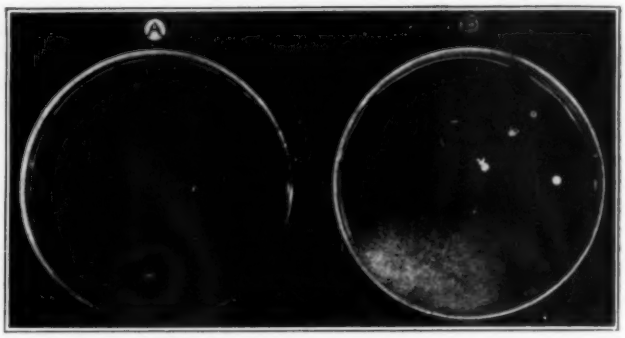
roller shades at windows, lighting fixtures anywhere but in the ceiling, etc. These things are generally not given thoughtful consideration.

Several remedies suggest themselves in the case of wrongly constructed or badly placed permanent fixtures which are already installed. For instance, see that the operating and instrument tables are not directly under any such fixture. Another suggestion is the use of a glycerin solution in water, of about 10 per cent strength, in wiping off all such fixtures. This will leave a permanent wet and sticky coating, which will to a certain extent hold any dust that settles upon it.

Our bacteriological work-room is plastered throughout in one piece. The ceiling, walls, bench, and floor are a smooth, continuous sheet of magnesite plaster, coated with wax. There is a drain in the floor and in the center of the ceiling is a high-pressure sprinkler connected with the water system. By turning a valve, the entire room is sprinkled with water, which washes the walls, workbench, and floor. The sole purpose of this construction is to eliminate dust.

For producing a dustless air supply for the room we have investigated numerous devices and methods, and have constructed and experimented with several. One was an electrical heating system by means of which we sterilized air by passing it over resistance wire, heated by the electric current. An effective and much simpler device, however, was made by constructing a wooden box containing a single three inch layer of absorbent cotton. In about the center of this box, measuring from bottom to top, there is, in a horizontal position, one fixed frame and one removable frame, each covered with heavy wire screen, the inside size being about six hundred square inches. A layer of cotton about three inches thick is laid on the first screen and the removable screen is placed upon it to hold it down. The direction of the air flow is downward through this cotton. This gives a filtering area of about twenty times that of the pipe conveying the incoming air from the blower, and so correspondingly reduces the speed of travel through the cotton filtering medium. The source of air supply is a rotary blower, motor driven, the size of the delivery pipe being six inches in diameter. Another delivery pipe from this

Bacteriological workroom, showing exterior, with operators inside seen through the plate glass, sealed window. The room is plastered throughout on the inside, is provided with a high pressure sprinkler, which washes down every part of it, and is supplied with air, filtered through cotton.



Four-inch Perri plates of agar culture medium, used for testing the air in bacteriological workroom. Plate A was lying open in the room for one hour while air was supplied through the filter. There are no colonies on it. Plate B was lying open in the room for one hour while air was supplied without passing through the filter. There are thirty-four colonies on it.

filter box carries the air to the room after it has passed through the cotton.

We have by these means succeeded in providing ourselves with a room that is practically germ free, and with an air supply which enables it to be maintained in that condition practically for an indefinite period of time.

How far these almost ideal conditions can be applied to surgical operating rooms is a matter for study on the part of the staff, but we suspect that they can be almost wholly adapted. We certainly see no reason why an operating room cannot be supplied, during operations, with a copious supply of warm filtered air delivered near the ceiling. In this case all windows can be kept shut and what little motion of the air does exist, will be outward, thus tending to move all dust in that direction.

Enamel paint, glass, and other smooth surfaces are no novelty to the surgeon, but we emphasize the desirability of looking more closely to the dust problem from the viewpoint both of avoiding the tracking-in of dirt, which will later form dust, as well as keeping down the dust already in the operating room. Operating room doors should be kept closed and no unnecessary traffic to and from the room should be allowed. There is commonly not nearly enough of the feeling that the operating room is a holy of holies, not to be entered unnecessarily, and then only under certain conditions.

BUYING VEAL

It is not usually advisable to buy a large amount of veal at a time, that is, a whole carcass. Of course, it is not of great weight like that of other animals, but the cuts are not so readily utilized, mostly because of its unpopularity. One reason for this is that it is rather tough, which means long, slow cooking. It is low in fat, so other fats are needed in combination.

The wholesomeness and digestibility of veal were previously thought to be questionable, but the latest experiments are more hopeful in these respects. It is a law in the United States that veal should be three weeks old or more at the time of slaughtering. In Europe, it is slaughtered as young as three days, with apparently no ill effects.

Veal should be a pinkish color, the fat firm and white. It is used often to camouflage chicken, indeed it helps to extend "chicken à la king." The meat being light colored and with highly seasoned accompaniments, can hardly be detected. Some of the most favored veal cuts are the sweetbreads, liver, and veal chops.

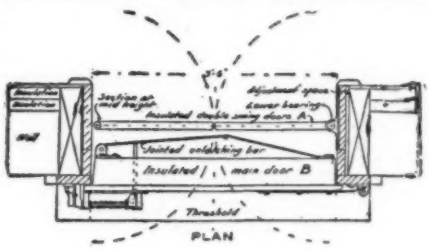
It is best to partly cook veal before storage, this is quite simple because it is certain that it will not be purchased in large quantities.

REFRIGERATION IN HOSPITALS

By JOHN E. STARR, Member A.S.M.E., and A.S.Rfg.E., New York City

IN THE original planning of a hospital, some attention should be given to the shape and grouping of the rooms to be insulated. The larger refrigerators are usually "built in" to the structure, especially in the culinary department and morgue.

By far the greater part of the heat to be taken away (equals cold produced) comes through the insulated walls, and the amount of refrigeration required is more in proportion to the square area interposed between the cold inside and the warm outside than to the cubic contents. Hence, the shape of a room to be cooled has much to do with its cost, both of installation and operation.



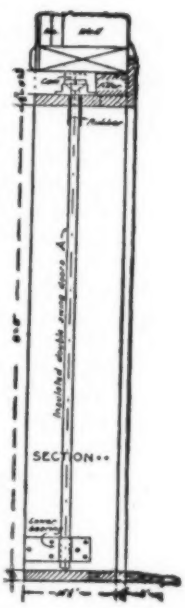


Diagram of insulated door for larger cold storage rooms.

A box ten by ten feet exposes 600 square feet of heat receiving surface, and contains 1,000 cubic feet, while a box six by six feet exposes 216 square feet of surface, and contains 216 cubic feet.

The first cost of these boxes and their cost of operation is more in the proportion of 216 to 600 than in proportion of 216 to 1,000, although the larger box contains nearly five times the cubic area of the smaller.

So, too, a box ten by ten feet contains the same cubic contents as a box twenty by five by ten feet, but the former has 600 square feet of surface, and the latter 700 square feet or 16 2/3 per cent more, and it will cost about 16 2/3 per cent more to build, and 16 2/3 per cent more to refrigerate. So the general rule is to keep as near a cube as possible. A perfect cube is seldom practical, but the nearer a cube the better.

Also, in grouping the refrigerators, it is wise, wherever possible, to have the various compartments enclosed in one area. For example, six compartments, each ten by eighteen by eight contain 8,640 cubic feet. If all separated, they expose 4,848 square feet between the warm and cold air. If grouped together, they can be arranged to contain the same cubic contents but only expose 3,216 square feet, and they will therefore cost only a little over two-thirds as much to build, and about two-thirds as much to operate. Where refrigerators are to be placed on two floors, the upper group can often be placed immediately over the under group and so save heat exposed surface.

It is possible in the culinary department and in the mortuary to practice economies in shape and grouping, but in the wards there is a requirement for detached refrigerators, perhaps one or two on a floor, and widely separated, so that little economy can be exercised here.

The correct balance between cost of insulation and operating costs indicate an insulation that will not allow more than 1.6 to 2 B.t.u. of heat to pass per square foot, per day, per degree of difference of inside and outside temperature, which means a pretty good insulation, from three to four inches of ordinary standard insulating board, such as cork, hair felt, mineral wool, etc. There are many of such insulators in the market, all of about the same heat insulating value per inch thickness per square foot.

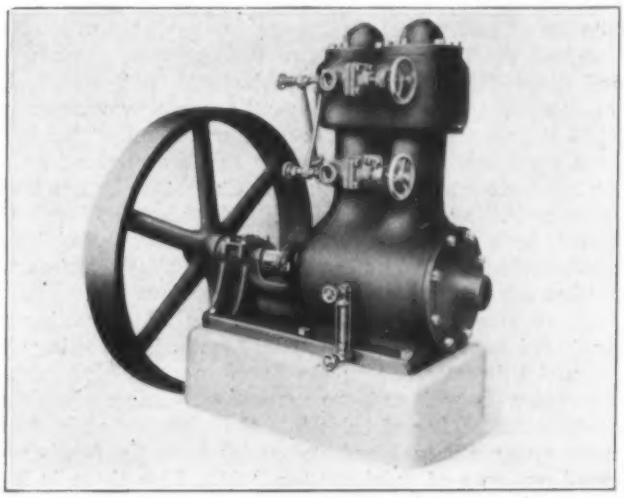
The modern method of cooling is accomplished by boiling a liquid of low boiling point and so taking up heat, either by boiling the liquid in pipes placed in the rooms or areas to be cooled, thus taking up heat directly (called "direct expansion"); or, in large hospitals, it is done by cooling an non-congealable liquid such as common salt brine (chloride of sodium), or chloride of calcium brine, and pumping this cold brine to the refrigerator where it circulates through piping placed in the refrigerators, and returns to the cooler, from which it is pumped again to the refrigerators. Thus it runs in a continuous circuit taking heat from the refrigerators and delivering it to the cooler.

The cooler evaporates the liquid to a gas and the so-called machine compresses the gas, with the assistance of cooling water, to a point where the gas liquefies or condenses, and the liquid is used over again, as it is much cheaper to liquify the gas on the spot than it is to buy fresh liquid.

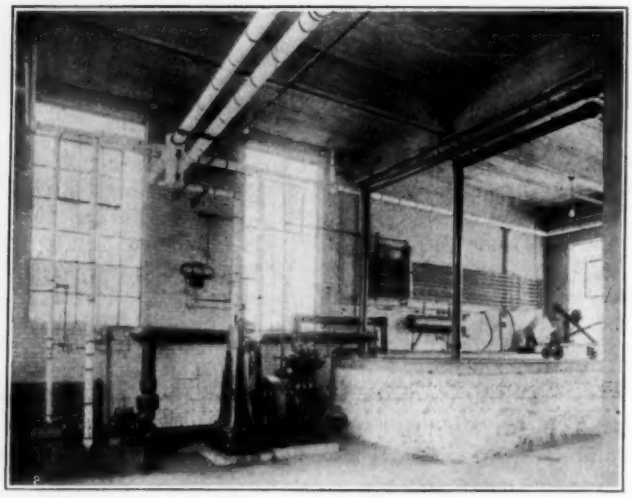
Ammonia, for example, costs thirty-one cents per pound, and one pound of ammonia in boiling to a gas takes up about as much heat as three and one-quarter pounds of ice would take up; or, the boiling of about 600 pounds of ammonia would take up as much heat as a ton of ice.

To buy 600 pounds of ammonia would cost at present about $189.00, but to recompress 600 pounds of ammonia gas to a liquid would cost only a few cents. Hence, we have the compressor and condenser of the compression machine, or the absorber still and condenser of the absorption machine.

Several liquids can be used. Anhydrous ammonia is the most common one. Any temperature above 28° below zero (F.) will boil it to a gas at atmospheric pressure, and any temperature above zero will boil it to a gas at



A typical gas compressor for belt drive.



A compressor driven by a vertical steam engine. It operates refrigerators either by brine or direct expansion. It also operates the small ice making tank shown on the right.

fifteen pounds pressure above the atmosphere. The gas condenses again to a liquid at 70° F. at 114 pounds, gauge pressure, and at 90° F. at 166 pounds gauge, so it is a convenient liquid to use as it gives a wide low range of temperature at pressures from 0 to 25 pounds gauge, and condenses at temperatures given by ordinary water supply at from 60° to 85° at reasonable pressures.

Carbonic acid (CO^2 or carbon anhydride) is often used. It boils at zero Fahrenheit at 273.3 pounds gauge, and at 10° above zero at 358 pounds gauge, and at 20° above zero at 407 pounds gauge. It condenses to a liquid at 70° F. at 830 pounds gauge, or at 85° F. at 1,011 pounds gauge. Although the pressures seem high they are easily held in extra strong pipes, with little leakage. If there is a leak of CO^2 it is hardly perceptible to the sense of smell, while a slight leak of ammonia is somewhat offensive to some people.

Chloride of ethyl is often used, especially in small machines. It boils at a vacuum at low temperatures and condenses at 60° to 80° at low pressures. If it leaks its smell is not offensive.

It must not be supposed, however, that low pressures mean less power per unit of refrigeration. Low pressures mean a large volume of gas at the evaporator, so that it takes as much power to compress enough gas of one fluid as of another to produce enough liquid to yield a given amount of refrigeration. Sulphur dioxide and chloride of methyl are also used.

All of the liquids used have their special advantages and disadvantages. Water can be used, but it boils at its freezing points of 32° F. at the very low vacuum of 29.74 inches, or very near no pressure at all. This is a hard pressure to maintain and as the low temperature is limited to about 32° F. it is not flexible. But ice has been made by boiling water at near 32° F. and water has been cooled, both on a commercial scale. Water would be a good liquid to use if our terrestrial requirements as to refrigerating temperatures were not so low.

In all large hospitals, the brine method of cooling is preferred to the "direct expansion" method, or cooling the rooms by directly boiling the liquid in room piping; for the reason that where there are a large number of refrigerators the feeding of brine into the room piping is much more easily managed and understood than the feeding of small amounts of refrigeration fluid. Also there is less trouble from leaks and objectionable resulting odour, the latter, if it occurs, is confined to the engine room.

In the large Bellevue Hospital in New York, there is a large brine system extending over an area of several blocks, with its flow and return insulated brine mains and miles of cooling brine pipe in the refrigerators.

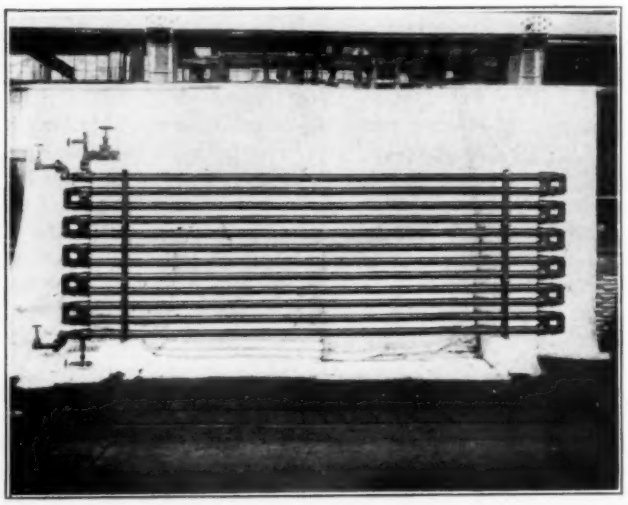
The temperature of the boiling fluid depends on the pressure at which it is boiled, the same as in boiling water. The lower the pressure the lower the temperature and vice versa. Of course, the lower the pressure at which it is boiled, the greater the volume of the gas per pound, and with condensing pressures the same, it costs more to create low temperatures than higher ones. So the rule is to boil out at the highest temperatures that will do the work.

Of course, as the temperatures are colder, the amount of heat receiving surface can be less; practically, however, the refrigerating fluid is boiled out at about 5° above zero.

This gives about 10° or 12° above zero in the brine, which, in turn, cools the refrigerators to the required temperature with a reasonable use of piping, and about balances the cost of piping and the cost of operation, and gives good results.

In condensing the liquid to a gas, water is commonly used to take the heat out of the compressed gas, or to cool it. The compressed gas is driven by the compression pumps into a series of pipes over which water is sprinkled so it runs in a film over the pipe surface, or often a double pipe condenser is used which is simply a pipe within a pipe. The water runs through the inside pipe while the compressed gas occupies the space between the inside of the outside pipe and the outside of the inside pipe. Several lengths of double pipe may be used in compact form, connected by suitable fittings or return bends to keep the water separate from the gas, but to allow heat to flow from the gas to the water through the iron walls of the pipe.

Considerable water is used. For example, a large hospital might use fifty to 100 gallons of water per minute; from 72,000 to 144,000 gallons per day, but the water after it leaves the condenser is available for any other use, as nothing is done to it but heat it up to ten or fifteen degrees. It is not in any way contaminated. If the water is not to be used over again for drinking purposes, it may come from any source that is reasonably clear and cool—even brackish or salt water can be used. Where water is scarce or expensive a device known as a "cooling tower" is used where the same water is used over and over again and is cooled by its own evaporation, in



A small "double pipe" condenser.

which case only enough fresh water is added to make up for the evaporation, a comparatively small quantity.

For special purposes such as ice cream making, sharp freezers, and morgues for frozen bodies, a lower temperature is required than the average of other work (such as ordinary food preservation) in which case a special arrangement referred to hereafter is often employed.

The variety of refrigerating machines adapted for hospital refrigeration offered in the market is very great, and many manufacturers are represented, as a glance at the advertising columns will show. Any one of fifteen or twenty reliable manufacturers can furnish all necessary apparatus and advance their claims of superiority.

In all hospitals, the potable and boiler water question is one of great importance. All waters are not suitable for use either from a pathological or technical standpoint, but nearly all water can be treated by apparatus, chemicals, and electrical agencies, so as to render it fit for any use.

A large number of concerns make a specialty of water treatment to render it potable and otherwise usable, and there is a requirement for cooling quantities of it for potable purposes in all departments.

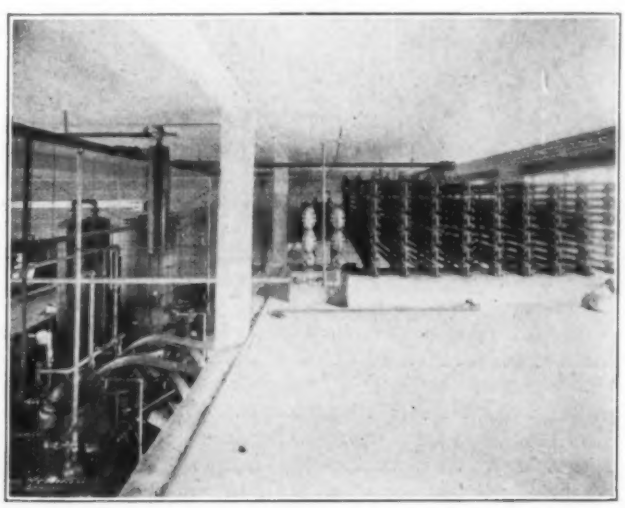
In a compact hospital, a central water cooling system is established with flow and return mains kept constantly and automatically full of cold water throughout the building. A temperature of about 40° in the water is usually held.

In hospitals much spread out, local water coolers are placed in each section or pavilion, from which water is pumped in circulation in flow and return insulated mains conveniently located. From these mains short runs are taken to taps so that the water will always be cold at first draw off into drinking vessels or bubbling fountains.

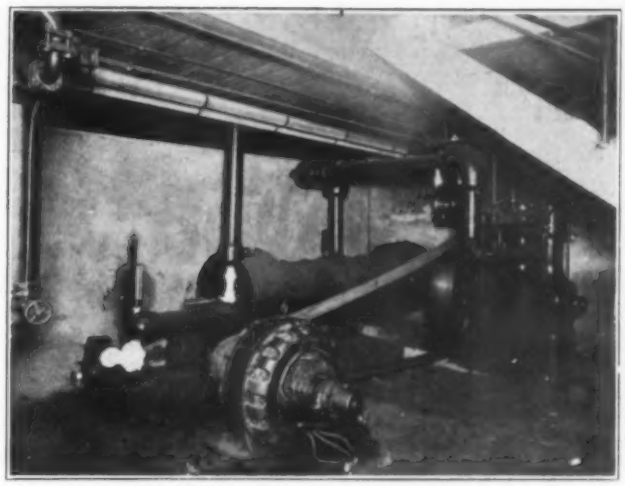
The water is usually treated at first, if necessary, or filtered, and is often in circuit exposed to ultra violet rays which render it sterile. The mains are insulated with standard cold water insulation, somewhat lighter in insulating value than the brine mains, as the difference in temperature between the water and air is somewhat less than between the brine and air.

Numerous types of cold water piping insulation are on the market. Plain black pipe is usually used, as galvanized pipe frequently engenders a zinc solution in the water which is harmful.

For an extensive system a closed or pressure cooler is used, which is supplied with either direct expansion or brine coils, and insulated, as this form can be placed anywhere in the water circuit.



A large power house interior, showing stacks of condensers at the right.



A motor driven compressor with brine cooler and brine pump.

An open cooler, or one exposed to atmospheric pressure can be used at the bottom or top of the system, in which case a medicated absorbent cotton vent is employed to purify any air that may come in contact with the water.

An ordinary water pump with the water end insulated is used for circulation, and also an automatic float inlet to make up any water drawn off. The inlet can be from the pressure filters, or if there is no pressure, a make up pump can be used, the pump being started, or the inlet opened, by an electric device governed by a float at the top of the system.

It often happens that a comparatively small amount of low temperature work is required in a hospital. Sometimes the bulk of the load as for food preservation, milk cooling, and water cooling, only calls for temperatures from 30° to 40° easily obtained by brine at 10° or 12°, while a small amount of work has to be done with temperatures of 0° to 5°, as in ice cream hardening. In such cases a "booster" compressor is often employed.

The evaporator for this takes its liquid from the main liquid supply. Its suction is run at low back pressures and therefore low temperatures. The suction runs to the booster compressor which discharges into the main suction line and the main machine compresses this gas back to a liquid. In this way low temperatures can be maintained as to a part of the plant, while on the balance of the plant (which may be the larger part) heat may be taken up on a higher plane. This obviates the necessity of taking up all of the heat on the low plane, and tends to operative economy and lower first cost of apparatus.

In the mortuary department, where bodies are to be kept until called for, or for dissecting purposes, it is usual to build freezing refrigerators, well insulated and piped for good circulation, and supplied with individual cells running from floor to ceiling. The bodies are laid flat on trays and slid into the cells or compartments. Each compartment has its door so that any door may be opened without opening the rest, and the tray with its body slid out. It then may be used for dissecting and if not all used may be returned. For exhibition, low boxes are built with sloping tops, and the bodies are laid on slightly inclined trays visible to the full length through glass covers of the top.

A temperature of 20°, which preserves the bodies indefi-

nitely, is maintained in these refrigerators. Cadavers of children and babies are often laid on metal grated shelves in the freezers.

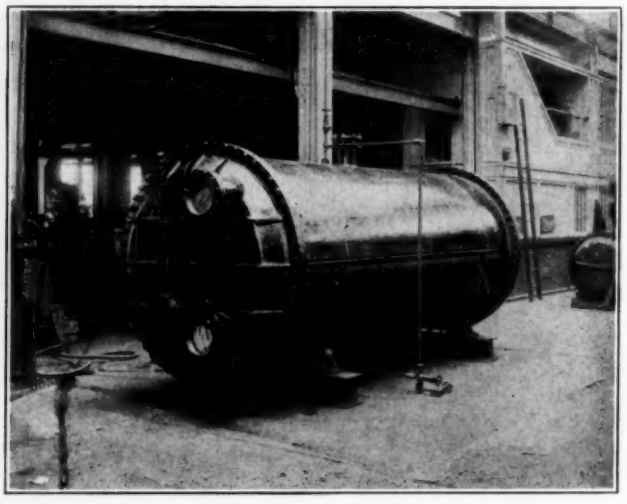
Most of the detached refrigerators are supplied with a milk compartment holding about a forty quart can, mounted on a sliding platform easily pulled out with the can, or else the can is set on a shelf bracketed to a well-hinged door that brings the can out when the door is opened. Bottles for modified milk are usually stacked on grated shelves.

Small, sharp, hard freezers for freezing tissue from which to cut thin slices for the microscope can be operated by a "booster" compressor, and held at 20° to 30° below zero.

The large "built in" refrigerators usually have small tile floors and sides of earthenware composition. Enameled iron sides often show rust discoloration at joints, but in stock refrigerators the lining can often be made in one piece with no joints. Vitreous enamel should always be used, as paint enamel does not last well. If a continuous vitrified enamel cannot be used, a heavy glass lining on the smaller boxes is recommended, but it must be heavy and tough, say from seven-eighths of an inch to an inch thick. Lighter glass is likely to break.

Monel metal grated shelves and shelf supports are probably the best. All corners should be rounded and all bases coved so that the refrigerators can be easily and thoroughly cleaned.

On the outside, all surfaces should be plain and flat;



A large brine cooler.

no fancy moulding or other dust catchers should be allowed. If a tile finished base is used, the sides should come flush without a bench.

For the large "built in" refrigerators, a white tile outside finish makes a handsome appearance and is sanitary and easily cleaned. The smaller detached boxes are usually finished in hard wood, toned to match the building trim.

Where refrigerators are higher than the eye level, it is a good plan to have the top sloped to the front and visible. An accumulation of dust on a high, flat top is thus avoided.

Great care should be used in the selection of hardware. Locks, catches, handles, and hinges should be heavy and not liable to breakage. Broken or imperfect catches and sagging doors due to poor hinges are responsible for 90 per cent of all refrigerator troubles.

Where pipe bunkers are used, they may be lined with galvanized iron.

In some climates it is desirable to cool a ward, or some portion of the habited space.

This is best accomplished by passing air through a water cooled air attemporator or conditioner, and discharging by ducts into the area to be cooled.

To be sure, the air can be cooled directly by brine or direct expansion piping, but there are conditions as to humidity and proper ventilation that can best be met by an air conditioner. There are several in the market.

If the water is not cool enough, it can be cooled and run to and from the conditioner in a circuit with proper provision for renewal. An ordinary water cooler is used for this purpose, and the air can be kept at any temperature and any condition of humidity. The content of CO^2 can also be kept down to the required limit.

An ozonizer can be used in connection with the air circuit if desired, giving a predetermined ozone content.

An ice making tank is a usual adjunct to a plant of this kind, either making ice in the modern way from pure "raw" water, or else from distilled water obtained from condensing steam used in the engines.

The ice is used for cracking up for fever patients, table use, etc., although mechanical compresses fed by cold brine in regular circuit have been used successfully in large establishments. It is easily attemperated.

Ice breakers and cubators, power and hand driven, of reliable make are sold by several concerns.

In some small hospitals, ice, and ice and salt refrigeration is still used. Galvanized iron cylinders can be placed extending from floor to ceiling at one or both ends of the room to be refrigerated, and provided with proper bulkheads to insure air circulation.

The tops of cylinders can extend through the floor above and be provided with insulated plug covers so that the cracked ice and salt can be renewed from above without entering the refrigerator. Temperatures below freezing can be thus maintained if desired.

For the small refrigerators, ice is used in the usual way. But where the total amount of heat to be taken equals or exceeds the amount that 1,000 pounds of ice would take up, it has now become almost the universal practice to use mechanical refrigeration as above indicated. The apparatus for this purpose is highly specialized by responsible concerns and its use is more flexible, much cheaper, and more sanitary than ice.

A NEW IN AND OUT REGISTERING DEVICE FOR THE ATTENDING STAFF

By L. A. SEXTON, M.D., Superintendent, Hartford Hospital, Hartford, Conn.

One of the many ways that a hospital has of showing its appreciation of the large amount of time given it by the attending staff, is to see that all their telephone calls reach them as promptly as possible. Failure to get a call through in many instances means that the patient goes to another physician, particularly is this true of emergency cases.

This always proves embarrassing to the hospital, and a material loss to the physician. If the hospital is to have the cooperation of the staff, every means should be employed to further their interests, as well as those of the hospital. With this idea in mind, it became apparent to us that it was necessary to have some definite means of knowing when the attending were in the hospital, and of reaching them promptly. This meant that there must be some sort of registering device to let the telephone operator know when they came in and went out.

The system we devised at the Hartford Hospital, Hartford, Conn., is an exceedingly simple one, and was made and installed by our own force, except the switchboard, which was made by a local manufacturer.

The switchboard, see Figure 1, consists of sixty sets of push buttons with a name plate under each set. These are arranged alphabetically and each one has a wire running to a twelve volt 2 candle power lamp, located with the telephone switchboard, each set having a common return. These wires are connected to the general lighting system with a 100 watt transformer which consists of 110 volt primary and a ten volt secondary. The reason for using a secondary voltage lower than the maximum lamp voltage is that it saves the lamps from at any time connecting up to the full candle power, and extends the life of the lamp accordingly.

The drop in the voltage with all sixty lamps on at one time is not over 40 per cent, so none of the lamps have had to be renewed during the two and a half years since the system was installed.

Each of the lamps is located in a cell one and a half inches square, and two inches deep, see Figure 2; these cells are made of poplar, one-eighth inch thick, and are all covered by a frosted glass door.

Printed over each compartment and arranged alphabetically are the names of the attending staff corresponding in each case with the same name and location on the switchboard at the front desk.

When an attending comes into the hospital he signs his name in a standard diary, indicating the hour of his arrival, and pushes the button that turns on the light in the compartment behind his name on the panel at the telephone board. This light burns continually as long as he remains in the hospital.

When he is ready to leave, he indicates the hour of his departure on the diary and pushes the button that turns his light out. The object in using the diary is to create a permanent record of each man's attendance, and to be able to state just when any particular attending left the hospital. A musolaphone is used as far as possible in locating the men in the hospital.

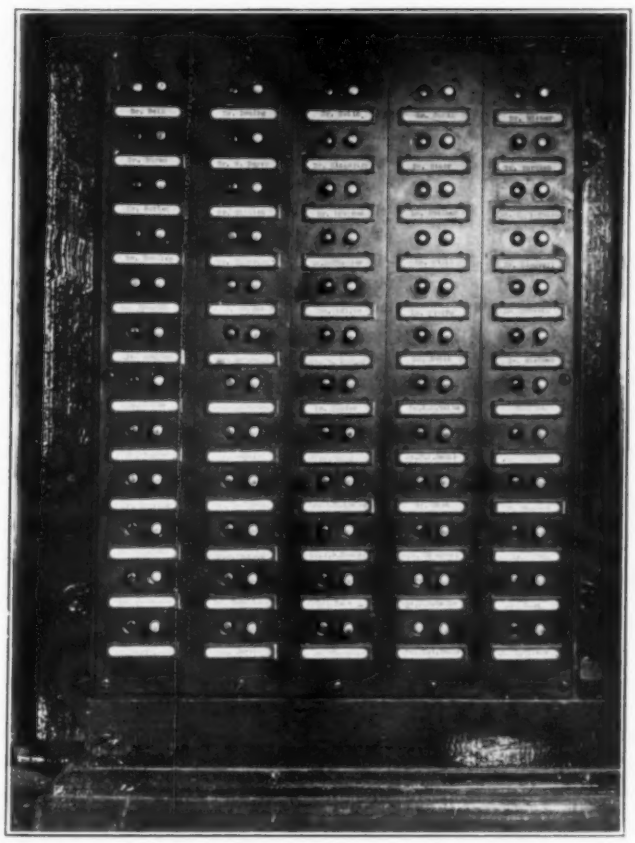


Fig. 1. The switchboard is located at the front desk in the main office.

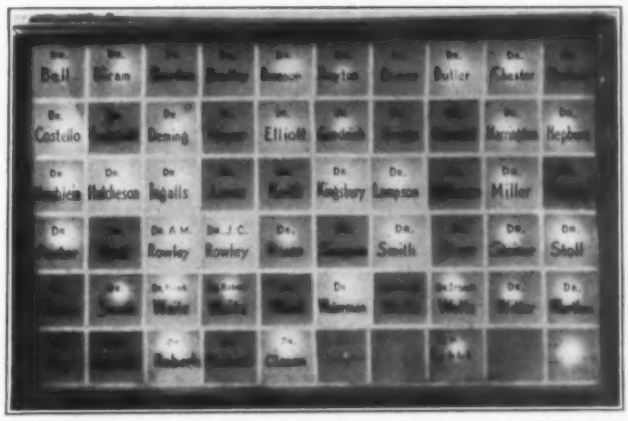


Fig. 2. This device, located on the wall by the telephone switchboard, indicates by the light whether or not the physician is in the hospital.

HARDENING GAS TUBES BY AN EASY AND RAPID METHOD*

By SIDNEY H. LEVY, M.D., and HUBERT MANN, M.D., Mount Sinai Hospital, New York City.

At the present time there are three recognized methods of hardening gas tubes which have become too soft for use: first, tubes may be hardened by setting them aside and allowing them to rest for an indefinite period; second, by passing a weak current through them for several minutes, either through the true or accessory anode, until the tubes are hot; third, by repumping them at the factory. The first two methods are time consuming and unreliable, failing completely in the case of very soft tubes. The third method is time consuming, inconvenient, and expensive.

The possibility of hardening x-ray tubes rapidly and conveniently, by cooling the softening device with an ethyl-chloride spray or other means, suggested itself on theoretical grounds. The efficacy of the method has been demonstrated by the successful hardening of twenty-five different gas tubes.

The actual method of hardening the tube is as follows:

1. A current is passed through the tube until it becomes fairly hot.

2. The softening device of the x-ray tube is sprayed slowly with ethyl-chloride, from thirty to fifty grams is generally sufficient. During the spraying, a coating of snow and ice should collect on the glass bulb of the softening device. It is advisable to protect the bulb of the tube with a towel, exposing only the chamber containing the softening device.

3. Allow the tube to stand five minutes, then dry it thoroughly. An electric fan aids in cooling the softening device during the spraying, and also later, in drying the chamber containing the softening device.

4. Reheat the tube by passing the current through the anti-cathode or accessory anode. After this procedure it is generally found that the tube is harder than before, and becomes progressively harder for about twenty-four to forty-eight hours. Different tubes vary in the ease

*Abstract of article by Drs. Levy and Mann which appeared in the March issue of the Journal of Roentgenology.

with which they are hardened; some require only one treatment and other several repetitions. Once the spark gap has begun to increase, it is easy to increase the hardness of the tube to any desired degree by repetition of the above treatment.

As a result of our experiments with twenty-five gas tubes of several different types, we wish to emphasize several points which will be useful to anyone employing this procedure. It makes very little difference whether the asbestos packing in the softening device is in direct contact with the outer glass wall or is contained in a separate tube. In general, older and more highly seasoned tubes require more preliminary heating, and respond to treatment more slowly than do newer tubes. The reason for this is that the tube must be heated sufficiently to drive particles of gas from the metal parts and glass wall into the bulb, so as to allow this gas to be absorbed by the softening material. Several treatments may be necessary, but once the spark gap has begun to increase it is a simple matter to attain any degree of desired hardness. Frequently it will be found that tubes will show almost no change immediately after treatment, but become much harder from one to twenty-four hours after. If at the end of twelve to twenty-four hours the tube does not tend to become harder, another treatment is needed. Tubes hardened by this method will keep their vacuum and gap indefinitely as shown by their daily use in the x-ray laboratory of Mount Sinai Hospital, New York City. The tendency of these tubes upon standing is to become progressively harder.

In conclusion, we feel that both theoretical considerations and practical results justify us in stating that gas tubes containing some hygroscopic material, such as asbestos packing, can be hardened rapidly and conveniently by cooling the softening device by an ethyl-chloride spray.

A STERILIZER CONTROL THAT IS ABSOLUTE

The sterilization control is one phase of hospital activity that is not given the attention it warrants. All of us believe our sterilizers to be efficient, but we do not throw around its performance a check that will insure the elimination of all lapses either in equipment or in personal technic.

With a procedure such as the sterilization of supplies, upon which so much is dependent, no trouble or expense is too great to insure an absolute performance at all times.

There has been devised, and is now on the market, a sterilizer control that, according to the government tests is absolute. In order that hospital executives may have the benefit of these experiments, a complete copy of the government's report follows:

The United States Bureau of Standards, reporting to A. W. Diack, on the melting conditions of sterilizer controls, says:

"The following table gives the time required for complete fusion at different temperatures:"

Temperature in degrees Centigrade	Time required to fuse
118	25 to 30 minutes
120	10 to 12
122	6 to 8
123	5

Conversion of the above to

	Degrees Fahrenheit	Gauge pressure in pounds
118	244.4	12.4
120	248	14.2
122	251.6	16

It must be kept in mind that the above relation of gauge pressure to temperature holds good only in the absence of air.

Therman death points of bacteria according to:

Muir & Ritchie, (Amer. ed., p. 32).

"One exposure of media to the temperature of *120 degrees C.* for *7 minutes* is sufficient to kill all organisms and spores."

Jordan, (6th ed., p. 26).

"A temperature of *120 degrees C.* is usually sufficient to sterilize completely all tubed media in *5 minutes.*"

"All air should be allowed to escape, as a mixture of steam and air does not reach the temperature indicated by the gauge."

Besson, (1914, French ed., p. 6).

"A duration of *20 minutes* in steam at *115 degrees C.* is sufficient to obtain complete sterilization."

Sternberg, (1901 ed., p. 158).

"Globig obtained a bacillus, the spores of which survived exposure for three-quarters of an hour in steam under pressure, at from 109 to 113 degrees C. They were destroyed, however, by exposure for *25 minutes* in steam at *113 to 116 degrees C.*"

Novy, (1889 ed., p. 165).

"Steam at *130 degrees C.*, under pressure, will destroy

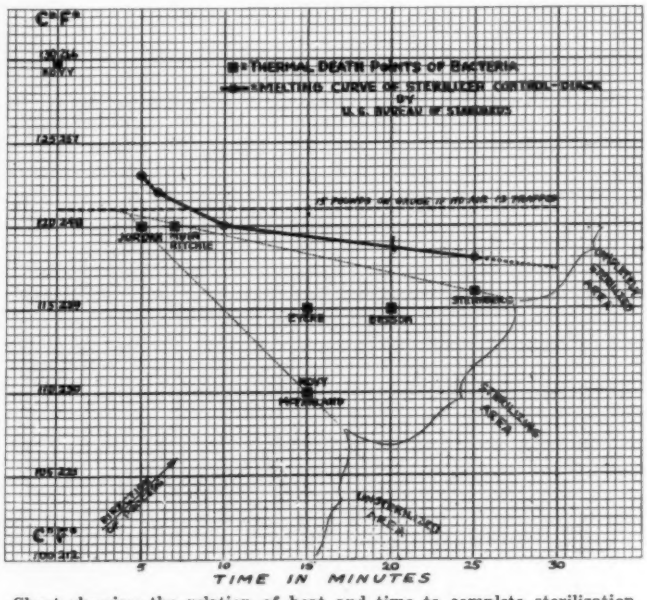


Chart showing the relation of heat and time to complete sterilization, in the presence of moisture.

instantaneously spores which are able to withstand 3 or 4 hours' exposure at 100 degrees C. A temperature of *110 degrees C.*, if allowed to act for *15 minutes*, will sterilize same."

McFarland, (9th ed., p. 174).

"Steam under pressure may be used to immediately destroy spores. The sterilization, to be complete, requires that the exposure shall be for *15 minutes* at *110 degrees C.*"

Eyre, (2nd ed., p. 36).

"Steam under pressure in sealed vessels at a temperature of *115 degrees C.* will destroy both vegetative and sporing forms of bacteria within *15 minutes.* If the temperature is increased to *120 degrees C.*, the same end is attained in *10 minutes.*"

The United States Government is having plans drawn for a hospital to be built at Paris Island, S. C.

TRY A GLASS COFFEE URN LINER

"Keep the coffee urn clean" has long been recognized as the first rule for making perfect coffee. The observance of this is made easy by a new glass urn liner which has recently been developed and is now being placed on the market. These glass urn liners have a smooth, flawless, hard, permanent, crystal surface that will not

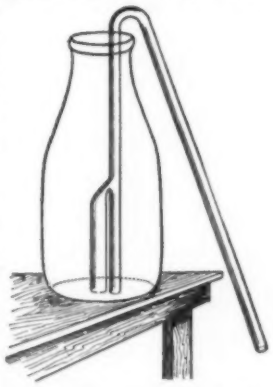
hold stains or dried on particles, while the impervious surface cannot absorb color or odor. The manufacturers claim that the new liner will stand an extremely hot temperature without breaking. In fact, a test occupying over a year's time has been most satisfactory.

The fact that these new liners are made entirely of glass permits them to be perfectly cleaned, and it is easy to see whether they are clean or not. Also, the objection frequently found in glazed surface liners—the cracking, crazing, or peeling off—is naturally absent. It would seem that this new liner will have a particularly attractive appeal to hospital executives on account of the perfect cleanliness that can be secured.

A SELF-STARTING SIPHON

There has recently been introduced on the market a self-starting siphon, possessing many hygienic advantages for the transfer of liquids.

This device is particularly adapted for the separation of the top milk or cream layer from the rest, in preparing modified milk for infant feeding. It is claimed that its use eliminates the danger of contaminating milk in rebottling, or in the use of various containers.



The operation is very simple. The shorter arm of the siphon is lowered to the bottom of the bottle full of milk, in which the cream and milk have separated into layers. The milk will at once begin to flow through the siphon tube. If the top milk is desired, the siphon may be withdrawn when the bottle of milk is half emptied. The milk left in the bottle contains all the cream. If a further separation of the milk and cream layers is desired, the siphon may be withdrawn when the cream line is reached, thus leaving the cream in the bottle.

NEW OPERATING ROOM LAMP RESEMBLES THOSE USED IN LIGHTHOUSES

There has recently been developed in France a new shadowless and concentrated light which is claimed to be particularly valuable for operating room use. The great problem in operating room lighting is to secure sufficient illumination, properly concentrated and without shadow. M. L. Verain, a French professor, has invented the new model lamp. The outfit consists of a gas filled high efficiency incandescent lamp placed in a circular lens of the same general design as lenses used in lighthouses. These lenses serve to project the rays of the light sideways,

where they come in contact with fifty mirrors arranged around the inside of a metal reflector bowl. These mirrors direct the light rays downward, where they form a circle of concentrated light, the diameter of the circle being dependent on the height at which the lamp is placed. As the light rays are reflected from the many mirrors the light secured on the operating table is always free from shadow.

SERVICE BUREAUS AT YOUR SERVICE

The Service Bureau on Dispensaries and Community Relations of the American Hospital Association, besides its general work of dispensing information along technical lines, is at present making a survey of the dental situation for parties desiring facts on this subject, and also a local survey of the hospital situation in Detroit. The Bureau is prepared to make local surveys of hospital or community relation conditions anywhere in the country at a minimum expense.

The Service Bureau on Hospital Social Service Work is now ready to make studies of hospital social work as conducted by any institution, and on the ground. All members of the Association are permitted to ask information and advice from the Bureau without expense.

MEETINGS, CONVENTIONS AND CONFERENCES

OHIO HOSPITAL EXECUTIVES AND NURSES HOLD JOINT MEETING IN CLEVELAND

HOSPITAL records, medical, administrative, and financial, held the center of attention at the opening session of the Seventh Annual Convention of the Ohio Hospital Association, which began its meetings at the Winton Hotel, Cleveland, on the afternoon of May 16, 1921.

Owing to the absence of Mr. P. W. Behrens, the president of the Association, Dr. A. C. Bachmeyer, first vice-president, presided, and read the president's address. In his address, Mr. Behrens dwelt upon the question of the shortage of nurses, and upon the necessity of having all of the hospitals of Ohio join the state Association and be represented at the annual conference. Mr. Behrens felt that the shortage of nurses, despite the fact that the state had been combed for the right type of girl to enter training, was due primarily to the long hours of service, and the necessity of carrying all their studies when off duty. He expressed his belief in the eight hour day as necessary for the health of the students and the success of training schools.

Urges Hospitals to Join State Association

Calling attention to the fact that 75 per cent of the hospital beds of Ohio were represented in the Ohio Hospital Association, and but 40 per cent of the hospitals, Mr. Behrens urged all hospitals in the state to join the Association, since only in this way could their united influence be used in furthering legislation helpful to the hospitals.

Following Mr. Behrens' address, Mr. F. E. Chapman made a brief informal report, as secretary. He stated that the Ohio Hospital Association had cooperated with the Ohio Public Health Federation in attacking obnoxious legislation. Owing to the introduction of a bill by the governor of the state, involving the reorganization of the state code, it was decided to refrain from introducing the proposed bill licensing hospitals in Ohio. Mr. Chapman felt that closer cooperation was needed on the part of members of the Association in order to present an undivided front, so far as hospital policies were concerned. He urged that the Association formulate its plans so that they would have the unqualified support of all the hospitals of the state, and that all the hospitals so conduct their own affairs as to play a telling part in carrying out these plans. He also urged the boards of trustees of hospitals to take a greater interest in their institutions.

Following Mr. Chapman's report, the session turned its attention to the subject of record keeping. This was introduced by Mr. Raymond F. Clapp, assistant director, Welfare Federation of Cleveland, who read a paper on "What Does Proper Recording of Hospital Performance Mean and What Are Its Benefits?" He said that there are three kinds of hospital records, case records, service records, and financial records of income and expense, but that he proposed to speak only of the second and third groups. The purposes for which these records may be kept are, first, self analysis of hospital performance, including the planning of regular work and the establishment of a proper basis of charge to beneficiaries; second, the securing of information on which to base appeals to contributors, and the accounting to the public for funds spent; third, the furnishing of material for publicity, both as to the activities of the hospital, and the general problem of disease prevention and cure. It is necessary, therefore, that accurate, complete records be kept both of receipts and expenditures of money, and performance of services.

Self Analysis Most Vital Use

The most vital use, in Mr. Clapp's opinion, to which records can be put, is that of self analysis. This will make possible intelligent action on present problems, and wise planning for the future, and it should show the strong and weak points in the hospital management. This can be done by having service expense tabulated by departments, preferably on a basis that is comparable with similar figures from other institutions, and from year to year in the same institution. Thus it may be determined if the hospital is increasing its service in proportion to the need of the hospital, and also if it is being run on a more or less efficient basis than in former years, or as compared with other institutions.

The recording of expense and amount of materials used will make possible a purchasing policy which will enable the institution to take advantage of seasonal price levels, and of special bargains.

Records Necessary in Fixing Charges

Expense accounting is necessary, also, if hospitals are going to accept the policy, which Cleveland has already recognized, that hospital rates should be based on the cost of the service rendered, and that persons financially able, should pay the full cost. Only with a careful expense account can the true basis be found.

For hospitals participating in community funds it is necessary to prepare a yearly budget, and other hospitals

would find it very beneficial. For this purpose records are indispensable. The budget should be used as a real working chart, and will show in advance necessary changes in financial policy.

Finally, Mr. Clapp emphasized the importance of records in the effort which every hospital wishes to make toward correcting the conditions which make disease possible.

Good Records

Dr. C. F. Holzer of Gallipolis introduced the discussion of this subject, speaking from the viewpoint of a small hospital. In reviewing the record system of his own institution, he brought out the fact that his institution kept service records of all departments in order to compare them with the expenses of these same departments. He maintained that the keeping of a storeroom and cost record system simplified purchasing in the small hospital, and expressed his belief in the possibility of a uniform type of hospital records, which would be applicable to all hospitals, irrespective of their size. He also maintained that the cost of keeping good records did not exceed the expenses that would be incurred as a result of keeping haphazard records.

Mr. H. J. Southmayd, of Columbus, chief of the bureau of hospitals of the State Department of Health, was scheduled to discuss Mr. Clapp's paper from the point of view of the department of health, but was unable to be present.

Dr. Warner Discusses State Associations

Dr. A. R. Warner, executive secretary of the American Hospital Association, who was to speak on the subject of "The Development of the American Hospital Association and the Geographic Sections," at the evening session, spoke at this session instead, and reviewed the growth of the organization of various state hospital associations, and the development of the idea of geographical sections of the American Hospital Association. He called attention to the fact that four state associations had now become geographical sections of the American Hospital Association, and that several other states were now considering the organization of associations with a view to becoming geographical sections. Of these states, the most notable were Missouri and New York. Massachusetts is also considering the question, but there is doubt as to whether is would be more desirable to form a Massachusetts state hospital association or a New England state hospital association. In closing his address, Dr. Warner called attention to the bills that had been introduced into the legislatures of a number of states, whose purpose was to force all hospitals that were free from taxation to admit all physicians licensed by the state to practice in the hospitals on an equal basis, and appealed to the Association to prepare itself to fight injurious bills such as this, which sought to undermine hospital progress and efficiency. To this end he felt that it was necessary for the hospitals to work in harmony with their medical staffs.

Father M. F. Griffin spoke briefly on the subject of "The Trained and the Untrained Anesthetist." He maintained that this was essentially a hospital question, and as such, hospitals ought to be vitally interested in it, and owed it to themselves to make plans that would protect their interests along this line. He called attention to the bill that had just been defeated in the Ohio Legislature, making the administration of anesthetics a medical practice. This would eliminate all nurse anesthetists. Father Griffin held that the administration of anesthetics is a specialty, but that it is not the practice of medicine, and that its administration does not call for a four year medical course. He did maintain, however, that anesthetists should have some special training. He felt that the hospitals should take the initiative in shaping whatever legislation was necessary along these lines to protect their interests, and moved that a committee be appointed by the chairman to report at the final session of the Convention on the subject of the trained and untrained anesthetist. This motion was carried and the meeting adjourned.

Dr. Smith Speaks on Minimum Standard

At the evening session on Monday, John R. McQuigg, Colonel of the Reorganized Regiment, and State Commander of the American Legion of Ohio, spoke on "The Need of Hospitalization for Service Men." As Judge Harold M. Stephens, director of the American College of Surgeons, Chicago, who was to have spoken on "The Application of the Minimum Standard and Plans for the Future," was unable to be present, Dr. James L. Smith, of Chicago, spoke in his stead.

The announcement at this session of the death of Mr. H. J. Johnson, one of the older representatives of the American Laundry Machinery Company, well known to hospital executives, cast a spell of sadness over the convention. A resolution was passed, expressing the Association's sense of its loss at his death.

The morning session on Tuesday, May 17, consisted of a round table on administrative problems. The sections were: Purchasing, conducted by Guy J. Clark, Cleveland; Housekeeping, by Miss Elsie Druggan, Mansfield; Accounting and Records, by C. B. Hildreth, Cleveland; Mechanical and Laundry; and Dietary, conducted by Miss Mary A. Jamieson, Columbus.

Tuesday afternoon's session was devoted to a discussion of the general subject of hospital social service. Miss Ida M. Cannon, chief of social service, Massachusetts General Hospital, Boston, was to have read a paper on "The Interpretation of Hospital Social Service," but she was unable to attend the meeting. Her place was admirably filled by Mrs. Bess Lynde Russell, director of social service, Michael Reese Hospital and Dispensary, Chicago. Mrs. Russell called attention to the fact that organized hospital social service was not yet fifteen years old, and that in this period social service departments having from one to thirty workers, had been established in three hundred out of a total of three thousand public service hospitals.

Social Service Must Assist Medical

Mrs. Russell endeavored to define hospital social service by a process of negation. She said it was not simply kindness, not the work of a public health nurse, nor managing a clinic; that it was not medical follow-up work, nor any old job that needed to be done; nor was it clearing hospital beds of chronic patients; but that its primary basis was to assist in medical service.

Mrs. Russell indicated that there were three kinds of medical social service work: first, intensive case work such as case work with patients suffering from tuberculosis, cardiac cases and the handicapped; second, steering work; and third, administrative work. In doing these three types of work she felt that the medical social service department should be regarded as an integral part of the hospital, and should have direct relationship with the superintendent.

In speaking of the training of medical social service workers, Mrs. Russell contended that a strong personality plus a wide cultural background were fundamental. If

she is to render efficient service, a social worker must like people, must have a power of persuasion, and a logical mind.

Must Get Behind Hospital Programs

In discussing Mrs. Russell's paper, Miss Malvina Friedman, director of social service, Mount Sinai Hospital, Cleveland, made the point that medical social workers must get behind the broad programs of the hospital, including legislative programs, that will give the medical social workers the facilities and the tools they need in order to carry out the directions of the doctors to their finality.

The committee appointed to consider the question of the trained and untrained anesthetist in Ohio rendered a report indicating that it was the sense of the committee that inasmuch as the legal aspects of this problem had been settled at this time by the Legislature of Ohio, and inasmuch as important plans are being formulated by other groups for the handling of the problem, the committee recommended that it be continued, with instructions to cooperate with said groups, and report to the board of trustees from time to time and at the next annual convention.

After a rather prolonged and animated discussion, the motion was carried that the Association reaffirm the principle of cost for service for industrial cases treated in the hospitals of the state.

A dinner was scheduled for Tuesday evening, at which F. W. Ramsey, president of the Cleveland Metal Products Company, was to speak on "The Spirit of Service," but as only thirty delegates indicated their intention of attending, it was called off.

To Prepare Brief in Legal Case

At the beginning of Wednesday morning's session, the routine business of the Association was transacted. A letter was read from Mr. C. A. Collins, the attorney for the Flower Hospital of Toledo, asking the Ohio Hospital Association to submit a brief in the case of R. O. A. Taylor versus the Flower Hospital, in which the Flower Hospital was being sued for damages due to the accidental burning of a patient by a hot water bottle. A resolution was thereupon passed instructing the board of trustees of the Association to accept the invitation to prepare this brief. In discussing this motion, Father Griffin took occasion to speak on the present status of the Association, and contended that it must become something more than a mere lyceum, something more than an annual gathering; it must organize to do something definite for its members, otherwise its existence would be jeopardized.

Resolutions were passed, commending Mr. Chapman for his efficient services during the past year as secretary, and expressing the Association's appreciation of the splendid cooperation given it by various state officials, including the officers of the Bureau of Hospitals of the State Department of Health.

A resolution was also passed reaffirming the action of the board of trustees in protesting against the methods pursued by the American Medical Association in listing the hospitals in Ohio eligible for the training of interns.

Specialization More Marked than Ever Before

Dr. A. C. Bachmeyer, superintendent of the Cincinnati General Hospital, in speaking on "The Necessity for Correlated Effort in Hospital Administration," began by reviewing the great advances which have been made in the past century, especially in the world of science. And, as a necessary correlation with the accumulation of this vast mass of knowledge, has come specialization. The disadvantage of this tendency in Dr. Bachmeyer's opinion, is the fact that the specialist is likely to become egotistical and narrow-minded, putting too much emphasis on his own branch of science.

A result of this specialization is the organization of many societies. They have in most instances developed into local, state, sectional, and national organizations. Each organization is likely to develop its own program without regard to the action of the other societies, and in this way is brought about much overlapping and waste of effort. Dr. Bachmeyer aptly pictured the situation, as a circle formed by a large number of specialists and hospital experts, but all are facing out. Each is looking at his own particular objective, instead of their all turning around and concentrating on a common purpose.

Not the least among the lessons taught by the war was that of "teamwork," and that must be the watchword in the future. The American Conference on Hospital Service was founded in an effort to furnish a medium for teamwork between the various large organizations; the Ohio Public Health Association has the same mission to fulfill among the agencies of the state of Ohio.

Institutions Must Have Teamwork

But these societies are founded upon the various institutions, and it is of vital importance that each institution develop a harmonious organization within itself. Frequent conferences of department heads of the hospitals are an important method of promoting this organization. Here, carefully excluding all petty jealousies, is the chance to "face inward."

In discussing Dr. Bachmeyer's paper, Miss Grace E. Allison, Lakeside Hospital, Cleveland, agreed that there was great need for more cooperation in the hospital. This need, she thought, was due to a lack of common understanding. To meet it she suggested monthly general conference meetings of representatives of the various departments, at which various phases of the hospital work would be discussed, and also regular weekly meetings of heads of departments, for the discussion of general problems. To these meetings heads of departments should come with an open mind, avoid personalities, and regard the welfare of the institution as the main consideration.

Discuss Correlated Problems

The Wednesday afternoon session was devoted to a round table on correlated hospital and nursing problems, led by Dr. E. R. Crew, superintendent, Miami Valley Hospital, Dayton, and Miss Daisy Kingston, City Hospital, Fremont. Various phases of the nurses' recruiting campaign were discussed. One point that was made clear was that this campaign could not be successful unless the interest and approval of mothers was secured; it was not sufficient merely to interest the girls in taking up this profession.

Miss Thatcher indicated that this coming summer a number of high school students would enter the hospital during the vacation period to supplement the work of the nurses. This will give them an opportunity to gain some knowledge of nursing, and enable them to make a wise decision as to whether they wish to enter the nursing profession.

In a discussion of the cafeteria system of serving meals for nurses, it was evident that the hospitals wished to get away from this system as quickly as possible.

The following officers of the Association were elected: President, Dr. A. C. Bachmeyer, superintendent, Cincinnati General Hospital, Cincinnati; first vice-president, H.

G. Yearick, superintendent, Akron City Hospital, Akron; second vice-president, Miss Daisy Kingston, superintendent, City Hospital, Fremont; treasurer, Dr. E. R. Crew, superintendent, Miami Valley Hospital, Dayton. Mr. P. W. Behrens, superintendent, Toledo General Hospital, and Miss Elsie Druggan, superintendent, Mansfield General Hospital, were elected to the executive committee.

Nursing Problems Occupy Last Two Days

The last two days of the convention were devoted to the program of the nursing associations, the Ohio Nurses Association, and the Ohio League of Nursing Education. Papers were read on the relation between the medical and nursing professions, the relation of a school of nursing to the hospital, and the relation of the nurse to the public. Lillian Hanford, R.N., principal of Miami Valley Hospital School for Nurses, Dayton, spoke on "Health and Recreation of Student Nurses"; and Ida May Hickox, R.N., Chief Nurse Examiner, Ohio, on "State Board Examination." There were round tables on the questions of school nursing in urban and rural districts, and industrial nursing; also under the public health section, round tables on nutritional classes for school nurses, and the question of tuberculosis nursing.

ORGANIZE INDIANA STATE HOSPITAL ASSOCIATION

THE Indiana Hospital Association was organized at a meeting held at LaFayette, Ind., April 27-28, 1921. The constitution and by-laws which were accepted were very similar to those of the Ohio Hospital Association, except that staff members of hospitals were made active members in the Association, as in the American Hospital Association. A resolution was passed applying for recognition as a geographical section of the American Hospital Association.

The official registration for the business meeting was forty-two, and the dinner in the evening was attended by about one hundred and fifty hospital executives, staff members, and their wives.

The most striking point about the meeting was the interest of members of the professional staffs. They were present from all parts of the state, and seemed to realize that they had a vital interest in the progress and standing of the hospitals of the state. This attitude, which is not often found to such a marked degree among medical men, is strictly in accord with the constitution and policies of the American Hospital Association.

After the organization and election of officers, a resolution was adopted applying for membership as a geographical section of the American Hospital Association. An invocation was given by Dr. Thomas E. Williams, followed by addresses of welcome.

In his address, Dr. Warner, executive secretary of the American Hospital Association, outlined the aims of the Association, and explained the method of state associations becoming geographical sections. Dr. Smith, representing the American College of Surgeons, spoke on the program of standardization of the College, and explained its advantages. Dr. Wetherill, in speaking on standardization as it affected St. Elizabeth's Hospital, LaFayette, outlined a system of grading records which has worked very well in this institution.

At the afternoon session, Dr. Woods, in his talk on professional efficiency, emphasized the importance of the relation to the patient of everyone connected with the institution. Each member of the hospital personnel, he pointed out, was taken into the organization on account of his fitness for his particular part in caring for the patient.

Miss Matthews, department of home economics, Purdue University, brought out the increasing recognition by hospitals of the value of the dietitian. She spoke of the rapid growth in the field of nutrition, and the fact that the successful dietitian must keep in touch with new developments. Miss Matthews felt that three or four months' work as a student dietitian would be enough practical experience, after a full course in home economics, to qualify the average girl for executive work in a hospital. She accounted for the shortage of workers by the lowness of the remuneration. She felt that the dietitian should have an adequate salary, and be ranked with the other executives of the hospital.

Dr. George F. Keiper, newly elected president of the Indiana Hospital Association, is eye and ear surgeon of St. Elizabeth Hospital, the Lafayette Home Hospital, St. Joseph's Orphanage, the Tippecanoe County Children's Home, St. Anthony's Home for the Aged, The Indiana State Soldiers' Home, all of Lafayette, Ind. Dr. Keiper is also ex-president of the Indiana State Medical Association, and an ex-vice-president of the American Medical Association.

The program of the meeting was as follows:

Wednesday, April 27, 1921

9:00 a. m.—Registration and Enrollment.

10:00 a. m.—Invocation, Thomas E. Williams, M.D., Trinity Church, LaFayette.

10:05 a. m.—Address of Welcome, Mayor George R. Durgan.

10:10 a. m.—Address of Welcome, Tippecanoe County Medical Society, President D. C. McClelland, M.D.

10:15 a. m.—Address of Welcome, Behalf Purdue University, President W. E. Stone.

10:20 a. m.—Response, A. R. Warner, Executive Secretary, American Hospital Association, Chicago, Ill.

10:40 a. m.—Temporary Organization; Appointment of Committee on Constitution and By-Laws.

10:50 a. m.—Hospital Standardization, J. L. Smith, M.D., representing the American College of Surgeons, Chicago, Ill.

11:30 a. m.—Grading Hospital Charts, R. B. Wetherill, M.D., LaFayette.

2:00 p. m.—Report of Committee on Constitution and By-Laws. Election of Officers.

2:30 p. m.—Hospital Construction, Charles Nichol, LaFayette, Ind.

3:00 p. m.—Efficiency in the Hospital, C. S. Woods, M.D., Indianapolis, Ind.

3:30 p. m.—Dietetics, Professor Mary L. Matthews, Purdue University.

4:30 p. m.—Visit Hospitals and, if possible, Purdue University.

6:45 p. m.—Dinner, Hotel Fowler. Compliments of Tippecanoe County Medical Society.

On April 28, unfinished business was taken up.

The following officers were elected: president, Dr. George F. Keiper, LaFayette; first vice-president, Miss Clara B. Pound, Richmond; second vice-president, Dr. W. O. Cross, Fort Wayne; secretary, Miss Anna Mendendorp, LaFayette; treasurer, Mrs. Ethel P. Clark, Indianapolis; trustees, for one year, Dr. A. M. Hayden, Evansville; for two years, Dr. C. S. Woods, Indianapolis; for three years, Dr. H. A. Duemling, Fort Wayne; for four years, Dr. T. B. Templin, Gary; for five years, Dr. Charles Combs, Terre Haute.

CATHOLIC HOSPITAL ASSOCIATION PLANS PROGRAM

The Catholic Hospital Association has announced a tentative program for its annual meeting in St. Paul, Minn., June 21-24, 1921. There will be papers on many interesting subjects, such as: The religious aspect of Sisters' hospitals, the ethical phase of Sisters' hospitals, and the scientific management of Sisters' hospitals. On the second day, there will be, among others, papers on local and general anesthesia, and a report of the nursing committee appointed at the 1920 convention. This report will be awaited with much interest, and a general discussion will follow.

TENTATIVE PROGRAM

1921 CONVENTION OF THE CATHOLIC HOSPITAL ASSOCIATION OF THE U. S. AND CANADA.

St. Thomas College, St. Paul, Minn., June 21, 22, 23, 24, 1921.

Tuesday, June 21—Morning Session.

9:00 a. m. Mass and Sermon.
11:00. Opening of the convention.
11:00 to 12:00. Address of welcome, and other introductory addresses.

Afternoon Session.

2:00 p. m. President's address.
2:30. Paper—"The Religious Aspect of Sisters' Hospitals."
2:45. Paper—"The Ethical Phase of Sisters' Hospitals."
3:00. Paper—"The Scientific Spirit of Sisters' Hospitals."
3:15. Paper—"Principles in the Control and Management of Sisters' Hospitals."
3:30. General discussion of first day's transactions.

Reverand Charles B. Moulinier, S.J., re-elected president of the Catholic Hospital Association.

Wednesday, June 22—Morning Session.

10:00 a. m. Paper—"Local Anesthesia."
10:30. Paper—"General Anesthesia."
10:45. Paper—"The Importance of the Internist's Position in the Hospital, from the Standpoint of the Surgeon."
11:00. General discussion.

Afternoon Session.

2:00 p. m. Report of nursing committee appointed at 1920 convention.
2:30. General discussion of this report.
3:45. Paper—"Retreats for Nurses."

Night Meetings—Doctors.
St. Paul Hotel.

8:00 p. m. Description and demonstration of a typical staff meeting.
General discussion.

For Sisters.
Auditorium of St. Thomas College.

7:30 p. m. Papers and discussions on problems of particular interest to the Sisters.

Thursday, June 23.
Conferences.

10:00 a. m. to 12:00 noon, 2:00 p. m. to 4:00 p. m., the following conferences will be held:

1. Mother Provincial and Superior, and superintendents.
2. Training school and supervisors of nurses.
3. Heads of floors.
4. Operating room nurses.
5. Anesthetists.
6. Laboratory workers.
7. Dietitians.
8. Supervisors of records.
9. Hospital social service workers.
10. Superintendents of dispensaries.
11. Doctors.
12. Graduate nurses.
13. Diocesan directors.
14. Chaplains, retreat masters, and sodality directors.

Night Meetings—Doctors.
St. Paul Hotel.

8:00 p. m. Paper—"The Practical Value of the Electrocardiograph in the Routine of Hospital."
Paper—"Basal Metabolism."
Paper—"Physiotherapy in the Hospital."

For Sisters.
Auditorium of St. Thomas College.

7:30 p. m. Papers and discussions on problems of particular interest to the Sisters.

Friday, June 24—Morning Session.

10:00 a. m. to 12:00 noon. Reports of the transactions of the Thursday conference.

Afternoon Session.

2:00 p. m. Reports of the officers.
Reports of the various committees.
Election of officers for the year 1921-1922.
3:00. Convention adjourned.
Meeting of the newly elected executive board immediately following the adjournment of the convention.

MICHIGAN HOSPITAL ASSOCIATION TO HAVE VALUABLE MEETING

The Michigan Hospital Association at its meeting on June 7 and 8, at Ann Arbor, will hear several authorities in the hospital field. Among them are Professor Hugh Cabot, of the University of Michigan Medical School,

Christopher G. Parnall, M.D., Medical Superintendent and Director, University Hospital, Ann Arbor, Mich., president of the Michigan Hospital Association.

on "The Avoidance of Psychological Damage in the Care of Hospital Patients"; and Mr. Frank E. Chapman, of Cleveland, Ohio, on "The Results to Date of the Cleveland Hospital Survey."

The entire program will be as follows:

Tuesday, June 7, 1921
Afternoon Session—2:00 p. m.

"The Hospital and the World's Life," Rev. W. M. Puffer, district superintendent of M. E. Church, member of board of trustees, Bronson Hospital, Kalamazoo, Mich.

"The Avoidance of Psychological Damage in the Care of Hospital Patients," Hugh Cabot, M. D., professor of surgery, Medical School, University of Michigan, Ann Arbor, Mich.

"Standardization from the Standpoint of the Small Hospital," Rev. Father M. P. Bourke, superintendent of Catholic hospitals in Michigan.

Evening Session—8:00 p. m.

Musical Program, University School of Music.

"The Results to Date of the Cleveland Hospital Survey," Frank E. Chapman, director, Mt. Sinai Hospital, Cleveland, Ohio.

Address—Marion L. Burton, president of the University of Michigan. (This has not been definitely decided.)

Wednesday, June 8, 1921
Morning Session—9:00 p. m.

"The Need for Hospital Facilities for the Care of Cases of Communicable Disease," W. J. V. Deacon, M.D., epidemiologist, State Department of Health, Lansing, Mich.

Round Table Discussion, in charge of W. L. Babcock, M.D., superintendent, Grace Hospital, Detroit, Mich.

Inspection of University Hospitals—Wednesday afternoon, June 8.

NORTH CAROLINA HOSPITAL ASSOCIATION DISCUSSES HEALTH PROBLEMS

The North Carolina Hospital Association held its third annual meeting at Pinehurst, April 26, 1921. Among the discussions were: "Development of Public Health Nursing and Cooperation with the Local Hospital," by Miss Columbia Mund, Consolidated Boards of Health, City of Wilmington and New Hanover County, Wilmington, N. C.; "Some of the Problems Confronting the Future Semi-Private Hospital," by Dr. J. F. Highsmith, Highsmith Hospital, Dix Hill, Raleigh, N. C.; "The Value of the Small Hospital to the Community," by Mrs. Walter Hughson, general manager, Grace Hospital, Morganton, N. C.

The following officers were elected: President, Dr. John T. Burrus, High Point; first vice-president, Dr. Moir S. Martin, Mount Airy; second vice-president, Dr. B. C. Willis, Rocky Mount; third vice-president, Miss Virginia McKay, Wilmington; present secretary, Dr. John Q. Myers, Charlotte, to be continued.

Executive committee: Dr. J. F. Highsmith, Fayetteville; Dr. J. M. Parrott, Kinston; Dr. John W. Long, Greensboro.

Delegates to state nurses' association: Dr. J. R. Alexander, Charlotte; Dr. L. B. McBrayer; Dr. E. T. Dickinson, Wilson; Dr. L. E. Farthing, Wilmington.

Committee to consider general nursing problems to meet with similar committees from nursing associations: Dr. J. F. Highsmith, Fayetteville; Dr. J. P. Munroe, Charlotte; Dr. John W. Long, Greensboro; Dr. J. M. Parrott, Kinston.

CONSIDER NEW ENGLAND HOSPITAL ASSOCIATION

A meeting of the executive committee of the Connecticut Hospital Association was held in New Haven on April 20, for the purpose of discussing the advisability of forming a New England Hospital Association to include all the New England states. Massachusetts is considering the formation of a hospital association, but is hesitating because it is felt that an association of all the New England states is the logical one to be formed.

INDIANA CATHOLIC HOSPITALS ORGANIZE

The Indiana Conference of the Catholic Hospital Association was organized at a meeting of the twenty or more Catholic hospitals of that state, at LaFayette, on April 28 and 29. Officers were elected as follows: President, Mother Josepha, St. Elizabeth's Hospital, LaFayette; first vice-president, Sister M. Catherine, St. Joseph's Hospital, Fort Wayne; second vice-president, Sister M. Louis, St. John's Hospital, Anderson; third vice-president, Sister M. Joseph, St. Vincent's Hospital, Indianapolis; secretary-treasurer, Sister M. Columba, St. Joseph's Hospital, Mishawaka. Members of the executive committee are: Sister M. Berchmans, Good Samaritan Hospital, Kokomo; Sister M. Gabriel, Wabash Hospital, Peru; Sister M. Sylvia, Sacred Heart Hospital, Garrett; and diocesan directors.

AMERICAN MEDICAL ASSOCIATION MEETS

The seventy-second annual session of the American Medical Association will be held in Boston, Mass., June 6-10, 1921. The Scientific Assembly of the Association will open with the general meeting on Tuesday morning, June 7; the sections will meet Wednesday, Thursday, and Friday, June 8, 9, and 10.

The opening meeting will be called to order by the president, William C. Braisted, Washington, D. C. After an invocation by the Rev. George A. Gordon, D.D., Boston, there will be an address of welcome by the Honorable Channing H. Cox, Governor of Massachusetts, and the Honorable Andrew J. Peters, Mayor of Boston. The president-elect of the Association, Hubert Work, Pueblo, Colo., will be introduced and installed, and will give an address.

Other organizations which have announced that they will hold meetings in or near Boston during the days immediately preceding or following those on which the Scientific Assembly will meet, are: Medical Veterans of the World War; American Association for Thoracic Surgery; American Association of Anesthetists; American Climatological and Clinical Association; American Dermatological Association; American Gastro-Enterological Association; American Gynecological Society; American Medico-Psychological Association; American Ophthalmological Society; American Orthopedic Association, American Pediatric Society; American Proctologic Society; American Radium Society, Association for the Study of Internal Secretions; Conference of State and Provincial Health Authorities; and the Radiological Society of North America. The Association of Military Surgeons of the United States will meet June 2-4, in the Swiss Room of the Copley-Plaza Hotel. The Medical Women's National Association will meet, June 11, at the New England Women's Club, 585 Boylston Street.

HOPE TO COMPLETE HOSPITAL BY 1925

It is announced that although all possible speed will be made in the erection of the huge $15,000,000 hospital which is to be built by Columbia University and Presbyterian Hospital, New York City, it will probably not be completed until 1925. Colonel William Barclay Parsons, chairman of the board of trustees of Columbia University, is of the opinion that the cooperation of the university and the hospital in building this institution is the biggest event ever known in medical history. Dr. William Walker Palmer, an associate professor in the College of Physicians and Surgeons until he joined the staff of Johns Hopkins University two years ago, is to be the new professor of medicine in the College of Physicians and Surgeons, and the chief of the medical service in Presbyterian Hospital.

MAKES GIFT TO SETTLEMENT

Mrs. Jacob H. Schiff has given $300,000 in memory of her husband, for the establishment of a central administration building for the Visiting Nurse Service, for the use of the Henry Street Settlement. Mr. Schiff aided in starting the visiting nurse service twenty-eight years ago. The new building will be at Nos. 97 and 99 Park Avenue. Mrs. Schiff's gift will provide for the complete equipment of the building, which, besides being used for administration purposes, will also serve as a training school for graduate and undergraduate public health nurses. A cafeteria, demonstration rooms, classrooms, and laboratories will also be provided. Provision will be made for living quarters for visitors from foreign countries who come here to study the visiting nurse service work in this city.

DR. SHUTT RESIGNS AS HOSPITAL COMMISSIONER

Dr. Cleveland H. Shutt, who has been hospital commissioner for the city of St. Louis, Mo., since 1911, has tendered his resignation. Dr. Shutt's health was impaired during the war and the influenza epidemic which followed, and he wishes to build up a private practice. As Dr. Shutt has been in the service of the city for sixteen years, he will wish to keep in touch with the city institutions, and serve them in any way that is possible in his private capacity.

PLANS FOR COMMUNITY HOSPITALS

One of the things touched upon in an address delivered before the Colorado State Medical Society, by Dr. Victor C. Vaughan, was the fact, which he says is recognized by all of us, that we as a nation are becoming too urbanized. But one of the most valid inducements which leads a young man to the city is the better protection that he finds there against infection, and the better treatment that he can secure if he becomes infected. Dr. Vaughan proposes that a model bill be framed for submission to the legislatures of the several states at their next session; a bill which would provide for a hospital in every community. It should be an enabling act, permitting any county or section of a county to constitute itself into a health center, and build a community hospital. The control of such a hospital should be under local direction, but with state supervision, so that a certain standard might be maintained. There should be at least one bed in the hospital for every district, and the salaries of the permanent staff should be paid by taxation. A part of this tax should fall upon the state at large, another portion falling on the people of the community concerned. The hospital should consist of several units: (1) a general hospital; (2) a tuberculosis pavilion; (3) an infectious pavilion; (4) a laboratory section; (5) a home for nurses. The staff should consist of (1) a commissioner of health of the community, who would also be director of the hospital and laboratories; (2) a surgeon; (3) an internist; (4) a laboratory man; (5) a certain number of trained nurses.

There would be in the hospital a small lying-in room, and x-ray facilities. This institution would be at the service of the people and the practitioners of the community. The local board having charge of the hospital would assess patients according to their ability to pay. Dr. Vaughan believes that the time will come when every community will have a diagnostic laboratory, connected with a hospital which is thoroughly equipped in every respect, where any citizen in the community may come for examination and treatment.

VENEREAL DISEASES AND THE HOSPITAL

Conducted by ALEC N. THOMSON, M.D.
Director, Department of Medical Activities
The American Social Hygiene Association, 105 W. Fortieth St.,
New York City

CHANGE METHOD OF REPORTING SYPHILIS DEATHS

The third conference for the revision of the international list of causes of death, held in Paris during October, 1920, decided that for the ensuing decade reports of deaths caused by complications or later stages of localized syphilis should be classified under titles for diseases of the various organs in which the syphilitic lesion is manifest. If American registration offices decide to adhere strictly to the requirements of the revised list, it will be necessary to classify under "diseases of the brain" every report of cerebral syphilis; under "cirrhosis of the liver" every report of syphilitic cirrhosis; and under "diseases of the respiratory system" fatal cases of syphilitic infection of the trachea, bronchi, or lungs.

For many years, all syphilis, whether localized or not, has been classified as syphilis. Under the new practice, it will not be possible to ascertain the total number of deaths reported as due to this disease unless registrars show separately for each of these scattered titles in the international list the number of syphilis deaths included. This scattering of syphilis entries over many titles of the international list will involve much labor for the registrar, and for the person consulting the reports for material comparable with the statistics of total syphilis mortality in past years.

The decision of the international conference on this point was made over the earnest protest of the American delegation, who had the support of the delegates of several other countries. If the Manual of the International List, based upon this third revision, is to be used by American registrars strictly in accordance with the practice prescribed therein, the total mortality from syphilis can be determined only if suitable sub-groups are arranged for the several titles receiving these new entries. It is much to be hoped that health officers and registrars will keep this requirement in mind and make possible a complete count of all the deaths due to syphilis that are reported to them.—*Statistical Bulletin*, Vol. 11, No. 2, February, 1921.

PHILADELPHIA'S METHOD OF VENEREAL DISEASE CONTROL

The *Monthly Bulletin* of the Department of Public Health of the City of Philadelphia, for March, 1921, outlines control of venereal disease in Philadelphia under the two general headings of routine and special procedure. The hospital or dispensary that handles patients suffering from gonorrhea and syphilis must out of necessity comply with the local rules and regulations. Unfortunately, not all institutions are complying with the necessary regulations of the health authorities. "We did not know" is often the excuse. It would be well for every hospital, dispensary, and private practitioner to ascertain the method of procedure in the community.

For comparison, the Philadelphia outline is as follows:

OUTLINE OF VENEREAL DISEASE CONTROL

By Dr. Howard J. Fretz, *Monthly Bulletin* of the Department of Public Health of the City of Philadelphia, March, 1921.

A. Routine Procedure:
   1. Physician reports case to health department.
      a. Serial number.
      b. Name and address.
   2. Physician gives patient educational booklet embodying venereal disease regulations.
   3. Change of physician by infectious patient reported to previous physician by present physician.
   4. Failure of infectious patient to continue treatment or to properly conduct himself reported to health department.
   5. Health department visits patient and insists on renewed treatment by:
      a. Own physician.
      b. Other.
      c. Venereal disease clinic.
   6. Refusal to renew treatment results in:
      a. Placarding of premises.
      b. Removal to hospital.

B. Special.
   1. Suspicious cases investigated by health department.
      a. Compulsory medical examination for suspected infectious cases not under legitimate control.
      b. Refusal of medical examination results in quarantine of premises.
   2. Prostitutes and allied misdemeanors under jurisdiction of municipal court.
      a. Prostitutes and associates arrested, brought before misdemeanor branch and continued for medical, including mental examination, and specimen findings.
      b. Defendants with positive laboratory findings have sentences deferred and are committed to detention home, Gynecean Hospital, Philadelphia General Hospital, or House of Correction, for medical treatment.
      c. Final disposition varies with case-type.
   1. Discharged under probation.
   2. Paroled to venereal disease clinic.
   3. Committed to industrial school farms, psychopathic institutions, reformatories, or houses of correction.

"Caring for the sick calls naturally for a consideration of social sympathy made useful and practical through training."—Aileen Cleveland Higgins.

HINTS TO HOSPITAL SUPERINTENDENTS

CEMENTS FOR EMERGENCY REPAIR

Hospital superintendents, particularly those connected with outlying institutions are frequently called upon to make emergency repairs and the following suggestions of "home-made" cements will be of value:

Freshly prepared curd from soured skim milk is mixed intimately with one-fourth its bulk of lime, which has been slaked by adding just enough water to cause it to fall to a powder. This cement, which is good for wood, marble, metals, and glass, should be used immediately as it soon sets to a hard mass. When used on marble or wood, it is advisable to first paint the surface with a solution of casein (curd) in borax solution or ammonia, to fill the pores.

Powdered and sifted quicklime mixed to a paste with white of egg quickly sets to a hard cement that can be used on ivory, marble, glass, porcelain, etc.

A waterproof cement for cisterns, casks, etc., is made from glue, mixed with one-fourth its weight each of boiled linseed oil and red ocher. The glue is soaked and melted in as little water as possible and the other ingredients are then thoroughly mixed in. The cement should set in two or three days.

Powdered whiting or air-slaked lime mixed with hot glue will adhere to wood and metals. Liquid glue containing acid should not be used.

Litharge and glycerine mixed to a paste form a cement that adheres strongly to metals, glass, etc. It is not softened by heat and resists the action of water.

Beeswax and rosin melted together in the proper proportion for the desired consistency form a cement that will adhere strongly if applied to warm metal or glass surfaces. It may be mixed with whiting, etc., to give it more body.

Shoemakers' wax and shellac melted together at not too high a temperature give a more tenacious cement than the preceding. The metal or glass to be cemented must be hot enough to just melt the cement. By changing the amount of shellac from one-half to two and one-half or three times the weight of the wax the resulting cement will vary from moderately ductile to quite hard and brittle form.

An excellent aquarium cement is made by mixing ten parts each by volume of litharge, fine sand, and plaster of Paris and one part of powdered rosin with enough boiled linseed oil to make the mixture somewhat stiffer than ordinary putty. The aquarium can be filled with water in three or four days, even though the cement may not have set hard.

Rubber cement is made by dissolving crude rubber in gasoline or benzene (benzol). Other ingredients, such as dry mineral fillers, gums, or resins, are sometimes added to adapt the cement for particular purposes.

In cementing two rubber surfaces together they should first be thoroughly cleaned with gasoline. This is absolutely essential to secure satisfactory adhesion. If the surfaces of the rubber are very smooth, they should be roughened slightly with sand-paper and again cleaned. A small quantity of cement is now spread over each surface, and after allowing a few minutes for the major part of the solvent to evaporate the two surfaces are stuck together and kept under pressure for several hours to give the solvent time to evaporate completely.

HOW TO CLEAN STEEL KNIVES

The proper care of steel cutlery has long been a source of worry to the hospital executive. An official bulletin issued by the American Cutlery Bureau of Information gives some excellent suggestions as to its proper care.

All tarnishing of steel knives can be avoided if the knives are cleaned immediately after use. The chemical action of the acids which causes tarnishing requires a certain time to accomplish its purpose, and the sooner it is interrupted the better it is for the future use of the knife. Do not leave steel knives lying uncleaned overnight. Rinse the blade carefully in hot water after use and wipe it dry with a clean cloth. This will destroy the acids. If there is time, polish the blade with a fine powder polish. The polish upon the blade of a good steel knife is produced by very rapid friction, which makes the surface of the blade absolutely smooth until it shines as does the polish on furniture or glass. Acids destroy the smoothness of the surface and eat not only into the polish, but create small indentures in which food will decompose and help to make the tarnishing of the blade permanent. Many machines and appliances for polishing knives are sold. The best one, however, is an ordinary bottle cork and some fine polishing powder. No appliance can replace the sensitiveness of the hand, and a few rubbings with the cork will not only remove all the uncleanliness from the blade, but also renew the polish which is its natural protector. Before polishing rinse the blade thoroughly with warm water and dry it. After polishing a renewed rinsing and careful drying will remove the remains of the polishing powder.

INSTITUTE FOR NUTRITION WORKERS

An institute for the training of nutrition workers is to be conducted in Chicago from June 13 to 28, under the auspices of the Elizabeth McCormick Memorial Fund. Dr. William R. P. Emerson of Boston will give the lectures and class demonstrations, assisted by members of the staff of the Fund. The fee for the course will be $50. Further information may be obtained from the Elizabeth McCormick Memorial Fund, 6 North Michigan Avenue, Chicago.

OCCUPATIONAL THERAPY AND REHABILITATION

Conducted by HERBERT J. HALL, M.D., President, National Society for the Promotion of Occupational Therapy, Devereux Mansion, Marblehead, Mass., and MRS. CARL HENRY DAVIS, Advisor in Occupational Therapy, 825 Lake Drive, Milwaukee, Wis.
Co-Editors: LORING T. SWAIM, M.D., 372 Marlboro St., Boston Mass., and MISS MARY E. P. LOWNEY, Room 272, State House, Boston, Mass.

THE EDUCATION OF THE O. T. AIDE

In this and the next few numbers of THE MODERN HOSPITAL we shall give particular attention to the educational problems which concern so vitally the new profession of occupational therapy. The situation is still plastic, there are suggestions of standards, but we shall not expect to reach a general agreement for some time. Meanwhile, discussion is of great value. We publish in this issue a paper by Miss Mary Jarrett, assistant director of the Smith College Training School for Social Work, and extracts from letters from several of the special occupational therapy schools. Miss Jarrett's paper is particularly interesting at this time when we are beginning to realize that social service, nursing, occupational therapy and physiotherapy are all parts of the great movement of rehabilitation.

It would seem at first thought that there might be great economy and many practical gains if the preliminary education for these rehabilitative professions could be merged. A long step in this direction would be made if we could ask a college education as the requirement for entrance in the special schools. In the college years there is opportunity for courses that would shorten the necessary time of special preparation or at least allow more time for actual practice work. Meanwhile, is any combination of courses practical? Against such merger is the need of developing a special viewpoint almost from the first. The occupational therapy worker, for instance, must study her anatomy, her physiology, her kinesiology from the viewpoint of special application, or she will be poorly equipped for her work.

The fact is that the different branches of reconstruction call for different types of girls. In the nurse, what may be likened to the medical instinct should exist along with certain motherly qualities which are hard to define; in the social worker we look for the statistician, the mind for scientific inquiry plus the social spirit; in the occupational therapy aide, a little of all the others, combined with a love for handiwork and design, the instinct of constructiveness. It will not always be possible to pick out the right girl for the right place, but a failure to do so may mean waste and some degree of ineffectiveness.

People choose their professional careers sometimes without sufficient thought and discrimination. Perhaps in the future we shall see physiotherapy aides shifting to occupational therapy, social service, nursing, or vice versa; that would be a useful reciprocation for the schools, and would involve comparatively little loss of time, since the courses have so much in common. It might be well for the heads of special schools to bear in mind the possibility of useful transfer.

The occupational therapy schools range in their time requirement from seventeen weeks to a year, presupposing a pretty good preliminary education. The writer has no doubt that a sufficient amount of didactic teaching and practice in the crafts can be crowded into this time if the pupil has already acquired good habits of study and application. But it does not seem reasonable to suppose that most girls can become fully competent in the clinical application of their art in such brief courses. We are inclined to believe that there should be a year of probation work under competent instruction before the occupational therapy aide is given her full credentials. That year could probably be managed on some such basis as is the rule for the nurses' training schools. There might be a resident service on small pay. This would be a time of the utmost value to the hospital and the probationer aide.

The writer believes that we shall see fewer crafts taught to aides or patients. It is inconceivable that the aide can in her short course of training become thoroughly conversant with such a wide range of technical work. Does it not go without saying that the aide should know her crafts thoroughly if she is to teach them even in rudimentary form? She must be an enthusiast in her work if she is to arouse enthusiasm in her patients. For example, everyone seems to agree that hand weaving is one of the most valuable of the crafts for the handicapped, yet it is only rarely that a graduate aide is to be found who is really competent to set up and operate successfully the various types of looms. If the number of crafts were cut down, and a more thorough academic training required for entrance there would be time for really thorough training in the crafts.

Nothing but praise is due the leaders who have made the occupational therapy schools possible, and who have so devotedly served during these early years of the profession. But it is time for us to consider seriously our shortcomings and to prepare for a more exacting future.

We must make occupational therapy as attractive as possible, we must not insist on too long a course, lest we scare away good workers who are badly needed now in the field, but we must remember that in the long run it will pay to be conservative. We must remember that one well trained aide is better than many with inadequate preparation.

The writer believes that there should be a canvass of the women's colleges, for here is the most likely source of good material. In some way the advantages, the splendid opportunities for service in the four principal rehabilitation fields should be made known to the undergraduates who are making up their minds what to do.

It will all come out right in the end, but we may save much needless delay by careful planning now.

SMITH COLLEGE CONDUCTS TRAINING SCHOOL FOR SOCIAL WORK

By MARY C. JARRETT, Associate Director, Smith College Training School for Social Work, Northampton, Mass.

THE Smith College Training School for Social Work is a graduate school conducted by Smith College, which offers training courses for medical social work, psychiatric social work, and community service, and also summer courses of study open to social workers, occupational aides, and teachers. The training courses extend over a period of fourteen months and are conducted according to a novel plan, by which the students spent two summers in study at Smith College, Northampton, Mass., and the intervening winter (nine months) in practice work in hospitals and social organizations in various cities under the school's supervision.

The origin of the school was an emergency course given by Smith College in 1918-1919 to prepare psychiatric social workers for service in military hospitals. In civilian neuropsychiatric hospitals the need for social workers to assist the doctors in securing the histories necessary for proper diagnosis and to help the patients establish themselves in the community had been fully demonstrated, and for several years before the war there had been a demand for psychiatric social workers that could by no means be met. Yet no training courses existed, except an apprentice training given by the social service of the Boston Psychopathic Hospital to half a dozen students at a time. The director, the late Dr. E. E. Southard, and the chief of social service of this hospital, believing that soldiers suffering from "shell-shock" would require the same treatment as civilian patients, and should have the best that was known, planned to give an emergency training course at the hospital. A large number of students could be admitted by the use of other institutions for practice work. The Permanent Charity Fund of Boston contributed a sum of money to make the course possible. By chance, rumor came that Smith College wished to use its equipment during the summer for some educational war work and was already considering a course for some type of mental hygiene worker. A combination was effected, by which the training course for psychiatric social workers was given by Smith College under the auspices of a committee of psychiatrists appointed by the National Committee for Mental Hygiene, of which Dr. Southard was chairman. This was the first public recognition of the psychiatric social worker, and when in July, 1918, sixty-three students assembled at Northampton they knew that they had come to make history. They represented twenty-one states and twenty colleges. Thirty-eight had previously been engaged in other occupations, twelve as teachers, sixteen as social workers, three as librarians, three as secretaries, and four in miscellaneous forms of work. Some of the social workers had already satisfactory preparation for social work, and went back to their positions after the summer course. Two of them went to take charge of the social service in state hospitals for mental diseases and have done remarkably well. The students for training were distributed among four cities, Baltimore, Philadelphia, New York, and Boston, for six months of practical case work. The term of practice work was made as short as possible because the graduates would be needed in the military hospitals even before they were ready.

The object of the course was to prepare social workers who should be able to perform three functions, if necessary, or any one of the three that might be required: (1) to secure social history essential to medical diagnosis by interviews or correspondence with informants, or by interviewing patients; (2) assist the physician in psychotherapy by such means as encouragement, explanation, re-education; (3) to promote the social adjustment of patients upon discharge. The technic of social case work, taught by lecture and practice, was the basis of the course. It was recognized that an eight months course in a subject dealing with something so complex as human personality must be very superficial at best. But the aim was to drill the student in the fundamental habits of mind required for future development in her work, a professional attitude, adaptability, the habit of observation, and the psychiatric point of view.

The graduates of this first course for the most part carried out their purpose, working in military hospitals until these hospitals were taken over by the Public Health Service, when they continued in them under the Red Cross. Some of them are working in state hospitals, in social agencies, and in mental hygiene societies.

The course, as now organized on a permanent basis, consists of two months of study followed by nine months of practice and a concluding period of two months of study and writing of a thesis. The courses of instruction during the first summer session are social psychiatry, essentials of medicine, mental tests, social psychology, the theory of social case work, the field of social work, and government as a factor in social work. The course in social psychiatry comprises the main groups and simpler indicators of mental disease and defects and the principles of mental hygiene, together with a view of the governmental, social, family, and personal significance of psychopathic conditions. Clinical demonstrations are given at the Northampton State Hospital. The course in social psychology deals particularly with the instinctive, emotional, and associational motivation of conduct. The nature and significance of mental tests is taught, but not their performance, as the giving of mental tests is not properly a function of the social worker. The second summer session is devoted to discussion courses upon problems of mental hygiene, social work, and legislation.

Theory Before Application Considered Good

The method adopted by the school for practice work—nine months of full time continuous work upon the social service staff of a hospital—is believed by the faculty to have great advantages over the customary method of dividing the week throughout the school term between study and practice. The student who gives full time becomes completely assimilated into the organization, and being on duty regularly and uninterruptedly, is trusted with greater responsibilities, and therefore receives a richer experience. On the other hand, the concentration that is possible during a study period of eight weeks, makes a very intensive course.

The intensive instruction in social psychiatry before

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A MIXTURE
SPECIAL PACKAGE
NET WEIGHT 28 OZS
MAKES FOUR QUARTS
RASPBERRY
PURE FRUIT FLAVOR
VEGETABLE COLOR
This package makes four quarts of Jell-O. Serves forty to fifty persons according to size of portion.
Dissolve the contents of the package in four quarts of boiling water and set in a cold place to harden.
If only part of the contents is to be made up at one time, allow exactly one pint of boiling water for each 3½ ounces (100 grams) of powder
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any practical case work is undertaken seems to be particularly efficacious. Before being called upon to assist in the care of individual patients, the student learns the nature, causes, and effects of mental diseases, and the meaning of those unhealthy states of mind that do not rise to the degree of disease but are commonly known as "peculiarities." She learns to understand individuals in the light of their origin and development, and to deal with them as they are. She sees that it is necessary to observe and individualize in order to understand people. At the same time, in the courses in social work and government, she learns something of the relations of the individual to the community from the point of view of social case work, and she acquires some idea of the procedure of case work. With this knowledge and attitude she is in a position to do at once more serious and difficult case work than she could attempt without such preparation; and therefore she acquires in her period of practical training a richer and broader experience. Required reading and one course in theory of social case work throughout the practice period help to maintain a thoughtful and studious attitude.

The same plan is followed in the training courses in medical social work and community service. The summer sessions of these courses are open to experienced workers, such as social workers, occupational aides, and teachers who wish to add to their equipment. The course in social psychiatry which is given by a well known psychiatrist, (during the coming summer Dr. F. E. Williams, associate director of the National Committee for Mental Hygiene), with the assistance of other visiting psychiatrists, is of particular value for this purpose.

BOSTON SCHOOL OF OCCUPATIONAL THERAPY, INC.

By MARJORIE B. GREENE, and RUTH WIGGLESWORTH, Principals, Boston School of Occupational Therapy, Inc., Boston, Mass.

IN APRIL, 1918, the Boston School of Occupational Therapy was opened as a war emergency school to train young women in the shortest possible time to go into the military hospitals and direct the occupational therapy work.

The training then covered a period of twelve weeks. Fifteen different crafts were taught, but the application of these crafts could only be demonstrated by lectures because of the lack of time. Though all credit is due to those young women who first entered the occupational therapy field, they worked under great disadvantage, due to the lack of knowledge of the important medical details involved in their work.

Since the armistice, the Boston School of Occupational Therapy has tried to work out the best possible training for an occupational therapy aide. The school is affiliated with the Boston School of Physical Education and the Lloyd Training School, and at present the following outline is in force. Though this course is being constantly worked over and improved, on the whole it is proving most satisfactory.

First, and very important, is the choice of prospective applicants. Not every person who has the desire can really become a successful occupational therapy aide; though of course the "will to do" counts for a great deal, the true success of an occupational therapist depends upon her personality and adaptability, fortified by thorough training, experience, and sound judgment. Our age limit is still twenty to forty. Although we sometimes make exceptions to this rule, we prefer to do so for a person over forty rather than under twenty, in fact it is very seldom that a girl under twenty-three appears really qualified for this work.

The course now covers in all, twelve working months. Five days a week, from nine until four o'clock, observing the ordinary legal holidays.

The first nine months of the course are devoted to the actual medical and social service and craft study. Anatomy, kinesiology, and physiology are arranged and given by doctors and physical educational directors, and cover about one hundred hours. Examinations are given at regular intervals and a student must pass these subjects satisfactorily in order to receive her diploma. (It is possible for a person to be an only mediumly good craftswoman and still be a very good occupational therapy aide, if she thoroughly understands her crafts, and knows how to properly direct them, but she must have definite knowledge of what she is trying to remedy in the mental, nervous, and physical condition of her patient, in order to obtain the most effective results from her work, and to avoid doing real harm.

Lectures in psychology and social service are included, together with trips to settlement houses and a month's actual experience working in settlements. This latter we feel important because of the opportunity to learn of the actual home and community life, habits, and traditions, of the various nationalities that make up America.

The major crafts—basketry, bookbinding, design, jewelry, leather, modeling, tin, spinning, weaving, woodwork, wood carving, etc.—average from seventy to eighty hours each. The minor crafts, such as brushes, dyeing, jute bags, knotting, rugs, etc., numbering in all twenty-four subjects, cover about eighty hours altogether. Time is given in all work for practice without supervision, and for original work.

Throughout the course the students are constantly working out their crafts with the thought of the different types of patients in mind, such problems, for instance, as appropriate crafts for a one-armed patient, or for those with no arms at all. Infantile paralysis in all forms is given special consideration and study, as are also tuberculosis and psychopathic cases. Lectures and demonstrations are given in work for the blind. And of course much time and attention are devoted to those unable to rise from their beds and yet who need, most of all, the attention of an occupational therapy aide.

The subject of design is given special consideration all through the course. Though it is a great asset if an aide is herself proficient and trained in the art of design, we do not consider this to be an absolute necessity, as we feel it can be sufficiently supplied, to those previously untrained, by a careful study of the fundamental principles of line and color, followed by supervised trips to the art museums and art exhibitions. Though it is always to be borne in mind that we are medical workers, we are of course anxious to make the standard of our craft work the highest possible. Students are always allowed and encouraged to trace designs, and are supposed to have in their sample book when leaving the school, numbers of designs appropriate for all subjects, so that they need

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not spend time for this when first entering the field.

Reading is carefully prescribed, and the keeping of note and sample books is made a special point.

Considerable attention is also given to reports and requisition slips, and the general system necessary in carrying out the responsibilities devolving upon an aide and head aide in the hospital.

During this nine months' period, besides the daily medical and craft study, lectures are given by different specialists in medical and general welfare work, with trips to different institutions and hospitals for observation. Lecture topics such as: the psychology of nursing, hospital ethics, tact in presenting work—personality, etc., adapting the work of occupational therapy to specific illnesses, crafts for ambulatory patients, exactness in making reports, ordering supplies, technical and business terms—weights, measures, etc.

It is our aim to coordinate all subjects taught, and to show through the daily work the broad field open to the occupational therapist.

At present, in connection with the district work, which is supervised by the school and under the direction of one of our graduates, we are running a small workshop in the school, for those patients able to leave their homes for a few hours a day, but who are not yet ready to return to regular work. This shop is watched with keen interest by the students, and brings home to them from the start the real aim and practical application of occupational therapy.

The last three months of the course are spent in the different types of hospitals, and in the district, under the direction of a trained occupational therapy aide who is personally responsible to the school for the work of the undergraduate aides. This experience work is divided as follows: one month in a psychopathic hospital, one month on the district, as an occupational therapy aide's assistant, two weeks in a tuberculosis hospital, and two weeks in a general hospital.

We appreciate fully the fact that many of the subjects included in this comparatively short course might easily be a life study. We also appreciate that there is ample opportunity to extend this occupational therapy training another two or three years, but we do feel that this one year course which opens the eyes of the students to the many branches of study to be followed, and the many groups of people touched, makes it possible for an aide to enter the field well equipped in the fundamental principles of the work, with the opportunity of developing intelligently through the greatest of all teachers—practical experience.

We offer to all graduates the privilege of returning to the school at any time for advanced work, and it is with the keenest interest that we follow their progress and receive their suggestions for the help of future students.

POSTGRADUATE WORK IN OCCUPATIONAL THERAPY NEEDED

In the field of medicine, the man who depends upon early school and hospital experience to carry him all through life is in danger of becoming a back number. The whole range of medical literature becomes obsolete in a few years. Postgraduate courses are almost a necessity if the doctor is to serve his community well.

In occupational therapy, especially now, when the preparation in hurried and inadequate, there is great need of a school where the aides may go to brush up their subjects after a few years of actual hospital experience. The postgraduate student knows what is needed, and is in a fair way to get it when he goes back to school.

The Medical Workshop at Marblehead, Mass., has in mind the development of such a school. The plan is still without detail, but briefly it is this, that for perhaps a month twice a year lectures would be given by some high authority in advanced medical psychology, and in the principles and practice of applied design. The workrooms would then be open for special practical courses in weaving, and in toy manufacture, basketry, and metal work.

It should be possible, in summer at least, for the graduate aide to combine needed rest and recreation with such a course. The pleasant and stimulating association with other workers should prove in every way worth while.

This plan can probably not be carried out before another summer, but meanwhile the management of the Medical Workshop will be glad of advice and encouragement.

AN ALTERNATE STILL AVAILABLE

In the old days a young man who wished to study medicine apprenticed himself to a doctor, usually a country doctor. For several years the boy would take care of the doctor's horses, keep the surgery in order, and do odd jobs about the place, spending his spare time reading anatomy and materia medica. After a little the boy would get a chance to assist at operations, and he might even be asked to sit up as a watcher in pneumonia or typhoid cases. All the while he would be picking up odd bits of useful information about the practice of medicine. When enough money had been earned the doctor's boy took a few short winter courses at a medical school, and so became a doctor himself. If he had the right stuff in him and happened to have apprenticed himself to a good man, he could be counted upon to serve his community well enough. Such a course turned out strong, practical, resourceful men.

These are days of standardization and of thorough preparation, but in occupational therapy it is still possible for a girl to succeed and be what may be called a self-made re-aide. The state hospital or the small general hospital that has a good head aide may well, for a while at least, be open to girls who cannot afford the time for a regular course in occupational therapy, but whose natural abilities and whose previous education have prepared them in a way for occupational therapy work. These institutions cannot as a rule pay a large salary, but they can take in apprentices who are really in earnest. We cannot recommend this procedure except in rare instances, but it still remains a sort of rear entrance to the profession, and we must not forget that some of our best teachers in social service, for instance, have arrived by such a course. Soon this rear entrance will be closed, but meanwhile it may well be used by a few who see the opportunity and who are of the stuff to succeed against odds.

ENGLISH MEDICAL EXPERTS VISIT LIBRARY

Major-General Wilmott Harringham, Royal Army Medical Corps of England, and Sir Walter Fletcher of the British Research Council, are now in the United States investigating problems of medical education and medical progress. On April 29, accompanied by Mr. Frank Stubbs, of the Rockefeller Foundation, New York City, these distinguished guests visited the Hospital Library and Service Bureau, Chicago, Ill.

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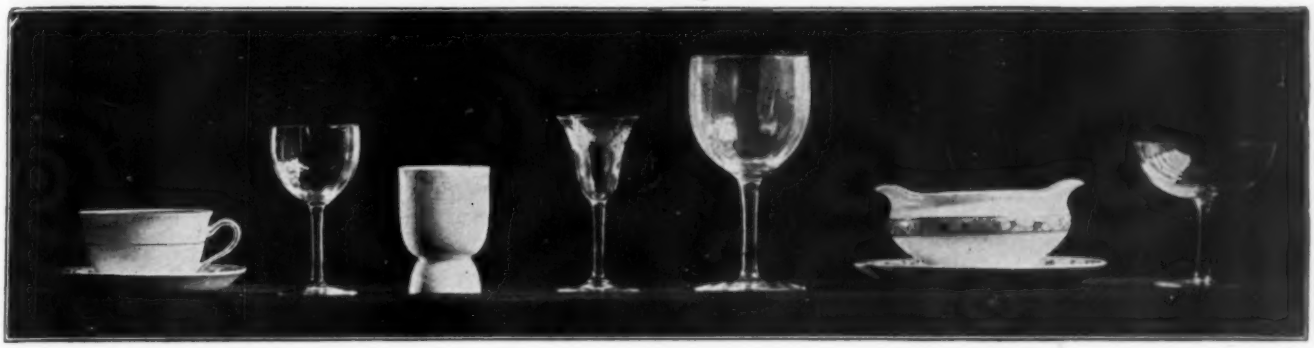

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THE PHILADELPHIA SCHOOL OF OCCUPATIONAL THERAPY

By FLORENCE WELLSMAN FULTON, Philadelphia, Pa.

IN PHILADELPHIA the appreciation of healing by occupation has been steadily growing among our doctors and surgeons, and the work, begun as a war time measure nearly three years ago, is now being continued in the interests of civil and private institutions, as well as in government hospitals. The directors of the Philadelphia School feel that they are doing all that they can to make the school a superlatively good one and are pledged to educate only the right type of women to enter upon this important field.

The regular course now being given in the Philadelphia School covers a period of nine months. The work in the crafts, and the lecture course begin early in October and continue for seven months. During the latter part of this period the students are sent out for hospital practice two half days each week. The faculty is composed of women who are not only expert in the particular crafts which they teach, but are also familiar with the application of these crafts to the practical needs of occupational therapy. The lectures are given by eminent physicians, surgeons, psychologists, and neurologists. A woman physician gives the course in anatomy and kinesiology, and another the lectures on personal and social hygiene. May and June are devoted to hospital practice exclusively. Up to the present time this practice has been divided between two hospitals, the Philadelphia General Hospital and the Pennsylvania Hospital for the Insane. This year the training will be slightly different. The students will be sent in groups of two and three to these two hospitals as usual, but they will also have the opportunity for practice, with maintenance, at the Friends' Hospital, and for field work under the direction of the occupational therapy department of the Visiting Nurse Society. Another departure, one that is strongly advocated by some of the physicians on our advisory board, is the placing of the student directly in the hospital to which she is to be detailed as an aide. Two of our students, therefore, without any preliminary training, are entering the tuberculosis work at Mont Alto, and a third will go to a general hospital where there is an urgent call for immediate help.

Would Like Two-Year Course

It is a matter of regret that up to the present time it has not been possible to have a course covering a period of two years. It has been found that the work is too new and too little understood for prospective students to be willing to enter upon a vocation requiring so long a training, and one which to many appears to be something in the nature of an experiment. In order to overcome in a measure this difficulty, the graduates of the Philadelphia School are urged to take up any new courses that may be offered the year following graduation, and certain courses are being developed so that there is always an opportunity for postgraduate work. In the meantime the course is a very full one, with few or no idle hours for the student. To those whose home duties are such that they can give only part time, a course is planned to cover a period of two years. Special students are also admitted for certain crafts, experience having proved that the interest of the special student is frequently so stimulated that she eventually enters upon the regular training in occupational therapy.

The directors of the Philadelphia School felt that the curriculum might be greatly strengthened if the latest ideas and improvements in technic and methods could be discussed by the heads of the various schools. In accordance with this thought, the dean of the Philadelphia School visited several of the Western cities about a year ago and, where a school or hospital had developed some particularly good plan of work, the idea has so far as possible been carried out in the Philadelphia School. From the St. Louis school the plan of the workshop for the handicapped was developed, and the work in the Chicago State Hospital and in the Milwaukee Children's Hospital suggested that some kindergarten training might be useful for occupational therapy aides Various minor ideas were appropriated and are herewith gratefully acknowledged.

Require High School Training

The entrance requirements are a full high school education or its equivalent, and stress is laid upon suitable personality as well as a high degree of physical health. Those who have already had experience in teaching are excused from any craft in which they are proficient, and are given this extra time for hospital practice or field work. In this way their actual working hours may be appreciably reduced. Diplomas are granted only to students successfully completing the course of instruction and the hospital practice.

The total number of hours of work in the school, including visits to various institutions and preliminary hospital practice, is 885, and the time required for outside work is approximately 280 hours. The time is divided as follows: lectures and visits to institutions, among which are the school for the blind, the speech reading school, the home for feeble-minded, and the public health hospital, 200 hours; wood construction, toys, etc., eighty-two; weaving, 126; reed basketry and chair caning, eighty-two; varied crafts, including filet and pillow lace, cord knitting, bead work, etc., eighty-two; elementary book binding, sixty; chip carving, thirty-two; simple jewelry, forty-two; kindergarten, forty-two; design, on which great stress is laid, applied to stenciling, block printing, pottery, modeling, etc., 137.

So far no academic studies have been required, though there is a prescribed course in reading. The study of at least one language is under consideration for another year, and a short training in business methods is being planned.

Patients Sent to Workshop

The workshop for the handicapped is under the direction of one of the graduates, with two of the students detailed as assistants. Patients are sent to us from the Visiting Nurse Society, the Episcopal City Mission, the Farmington Clinic, the Southeastern Pennsylvania Chapter of the American Red Cross, and from various other charitable institutions of the city. A cardiac clinic at Mount Sinai Hospital is planning to make use of the workshop on regular days, as soon as the school can offer the proper facilities to care for so large a number of

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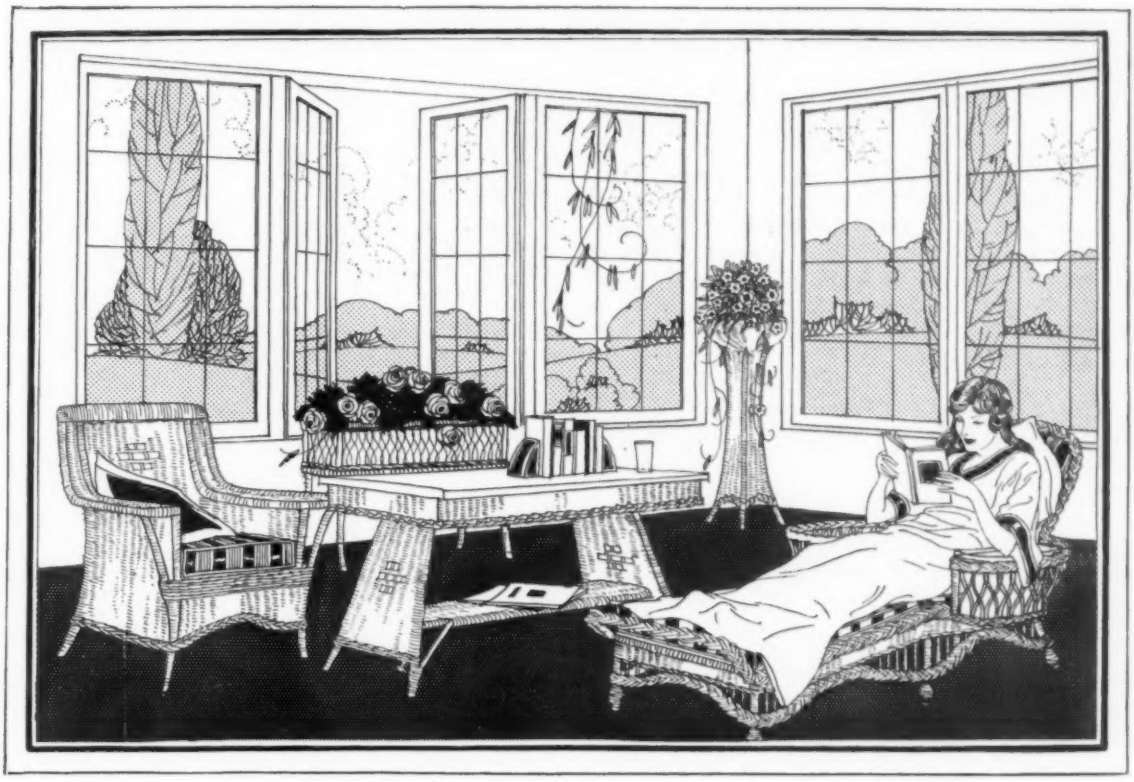

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patients. Since it is an undeniable fact that occupational therapy is a tremendous factor in the treatment of industrial accident cases, the school authorities are being urged by those closely in touch with the industrial plants to enlarge the workshop in order to care for as many such cases as possible. To meet these conditions, the directors feel that a larger building, with modern equipment, is absolutely indispensable to the success of the work, and the future development of the school.

The interest in the work of occupational therapy, and incidentally in the school, is growing day by day. The State Federation of Pennsylvania Women has endorsed the work, and put it into the hands of a special committee functioning under the committee of health and hygiene. This committee is giving publicity to occupational therapy, its possibilities, its needs, and its advantages. The Junior League of the Delaware County Woman's Clubs is following the example of the Junior Leagues of St. Louis and of Milwaukee, and is proposing to take over, as its after-war service, the Philadelphia School, planning for scholarships, and trying to create definite interest in the development of occupational therapy.

THE RED CROSS SCHOOL OF OCCUPATIONAL THERAPY AT DETROIT, MICH.

By CAMILLA B. BALL, Director Educational Department, Committee on the Handicapped, American Red Cross, Detroit, Mich.

During September of 1918 a school of occupational therapy was instituted in Detroit, by Mrs. H. B. Joy, and Mrs. William Burtenshaw, at the old Newberry Home on Jefferson Avenue. The Detroit Chapter of the American Red Cross financed this activity. Its purpose was to meet the call of the Surgeon General for reconstruction aides in the United States Army. Since its beginning seven classes have been graduated from the school, and most of these occupational therapy aides are now engaged in their profession in the various hospitals of the country.

The school, through its affiliation with the Red Cross, together with the influence of a philanthropic group of women of the city, has attracted an unusual set of students from year to year. The majority of applicants were college women or women who had acquired some measure of success in business, one of the professions, or art. With their splendid background, the occupational therapy students have used to unusual advantage the period of fourteen weeks' intensive training. The history of their professional success has been almost unbroken, and they are now doing work in the United States Army, United States Public Health Service, local hospitals, and other institutions.

Applicants for the school must be high school graduates and we ask for a year's college work, or its equivalent in business or art training. A student must be between the ages of eighteen and forty-five, and furnish three recommendations in regard to character. The school gives fourteen weeks' intensive training, and the students have the privilege of putting in nine extra hours each week in the workshop. The tuition for the course is sixty dollars, each student paying in addition for the material used in her own craft work.

The following crafts are taught and a notation is made of the number of hours devoted to each project: basketry, using reed, pine needles, and raffia, seventy hours; metal work using the medium of copper, brass, and sterling silver, and employing the methods of soldering, cutting, bending, coloring repoussé, etching, and piercing, seventy hours; weaving in plain rug designs and pattern, textile work in silk, cotton and wool fabrics, setting up Devereux Mansion, Lane, and Little Dandy weaver looms, seventy hours; chair caning, eighteen hours; bookbinding, including pamphlet binding and repairing, thirty-five hours; leather work, using the method of tooling, carving, rush seating, fourteen hours; plain close weaving of chair seats, seven hours; toy work, thirty-five hours; wood carving fourteen hours; modeling, fourteen hours; block printing, fourteen hours; manual training, seventy hours; design, seventy hours.

Seventy hours are given to lectures, and emphasis is placed upon the following topics: kinesiology, tuberculosis, surgical, mental, and general cases, the handicapped, blind, and crippled, as relative to occupational therapy.

Due to our affiliation with numerous hospitals and schools, we have an opportunity of drawing our instructors in the various crafts from a wide field, and as a result we are fortunate in having an expert for almost every subject. They bring an experience and training invaluable to the women in training.

After their intensive training in the school of occupational therapy, the students are placed for three weeks' training at the following institutions, and are supervised by the individual indicated: Curative Workshop for the Blind and Crippled, Newberry House, Camilla B Ball, director; Detroit Tuberculosis Sanatorium, Edith Sullivan, head aide; Harper Hospital, Miss McLaughlin, head nurse; Herman Kiefer Hospital, Cleora Wannamaker, head aide in occupational therapy; Kalamazoo State Hospital (mental), Marion Spear, supervisor.

At the end of the period of practice training, a report is made to the director of the occupational therapy school.

As a result of the interest centered around the school and its graduates, the Michigan Association of Occupational Therapy has come into being. The organization work was begun in January by the educational department of the Detroit Chapter of the American Red Cross. Its purpose is to further the work in the state, maintain a higher standard of professional ability, and facilitate the placing of aides in desirable positions. The following are the officers of the organization: Mrs. William Burtenshaw, president; Camilla B. Ball, vice-president; Marian Morton, recorder and secretary; Clara Beebe, treasurer. The headquarters for the association are at Newberry House, 1363 East Jefferson Avenue, Detroit.

EXAMINATION FOR RECONSTRUCTION AIDE

The United States Civil Service Commission announces an open competitive examination for reconstruction aide. Vacancies in the Public Health Service throughout the United States, at $720 to $960 a year, with quarters, subsistence, and laundry, where these are available, and the increase granted by Congress of $20 a month, and vacancies requiring similar qualifications, at these or higher or lower salaries, will be filled from this examination. It is expected that several hundred appointments will be made.

On account of the needs of the Service, applications will be received until further notice. Papers will be rated as received. Applicants should apply to the Civil Service Commission, Washington, D. C., for Form 1312, stating title of the examination desired, or "Reconstruction Aide."

As part of its participation in the celebration of "Hospital Day," the Schirrman Hospital, Portsmouth, Ohio, sent out a little pamphlet "intended as a contribution to the nation-wide movement for better hospital service." The pamphlet set forth the aims of the hospital and its policy, and gave a little tribute to Florence Nightingale, on whose birthday Hospital Day was celebrated.

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DISPENSARIES AND OUT-PATIENT DEPARTMENTS

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Executive Secretary, Committee on Dispensary Development, United Hospital Fund of New York, and Chief, Service Bureau on Dispensaries and Community Relations of Hospitals, American Hospital Association, 15 W. 43rd Street, New York

THE WIDENING SCOPE OF DISPENSARY SERVICE

BY JANET THORNTON, BOSTON, MASS.

DURING the past twenty-five years dispensary service has developed rapidly in almost every part of the country, and today dispensaries are the greatest organized force in the health movement. Health is the slogan of our generation, health for children, health in industry, health for all—a world embracing concept. The word holds for us the aspiration and effort that "education" held for our forefathers, and the ministers to minds or bodies diseased, rank every bit as high as ministers to the soul. Indeed the search for health is so ardent among us that to some skeptical natures it appears more morbid than the distempers it combats. Yet deeper knowledge and experience of the health movement lead rather to amazement than skepticism; amazement first, that medical knowledge should keep so far ahead of medical practice, and that the best medical practice should reach so small a part of the community; amazement again, that so much we have believed sound hygiene in the common experiences of life, relating for instance to food and drink, to fatigue, to education, and above all to human relations, should be questioned and found wanting, and that even the small body of scientifically established principles of hygiene should be so generally ignored. Out of these states of amazement come reflections of concern to dispensary workers. Looking upon our community life, it is saddening to realize that we are still, after many thousands of years, unable to live together without hurting one another in both physical and spiritual ways.

Furthermore, those who can know and watch the sick realize that the victim of disease is largely not to blame for his condition, while he must largely bear the burden of it. How little the community is concerned for its part in illness is proven by the slender support granted most of our medical institutions. That no one in our communities liveth unto himself alone is conceded where scarlet fever, diphtheria, and other germ-borne diseases are present; it is more grudgingly conceded where syphilis and gonorrhea are concerned; only very dimly and partially where accident and disease arise in industry; and barely, if at all, in the most numerous group of maladies, those due to prolonged under-nourishment and the other hardships of real poverty. To the dispensary worker it becomes a primary duty to call upon every member of the human family to take his share of responsibility for the well-being of all, not merely for protection from harmful bacteria, but for opening the paths of opportunity to all, and every health worker knows that opportunity is lacking to the ill-fed, handicapped child of the tenement. Hygienic and medical knowledge do already exist in sufficient quantity to protect from bacteria and to liberate human life. It awaits but the power to put it to use. Now, may it not be that dispensaries, improved and adapted to larger community needs, will be the simplest and most practical means at hand for this purpose?

Several factors cause the obstruction that now hinders the free release of power which would make better and fuller use of the medical knowledge and skill stored away; and of these the two prominent factors are the dearth of trained social service personnel, and insufficient financial support. The latter is today uppermost in the minds of all hospital and dispensary administrators. Where is the money to keep up our institutions even in their present inadequate state, not to mention improvement or expansion?

One cannot but wonder whether we may not be approaching the limits of benevolence as expressed in charitable donations, and whether it may not soon be necessary to find ways to distribute more equally in the community the burden of support of our medical work. Even an expenditure of $158,000, which was necessary to maintain the clinics of the Boston Dispensary last year, does not furnish really adequate conditions for the best medical practice, and does not adequately recompense those rendering service. Only about 12 per cent of our medical staff receive any remuneration. In many departments the medical staff is overworked, in almost all the social service, the nursing, and the clerical staffs are overworked. The result is insufficient study of the patient's needs, insufficient interpretation and instruction to him, insufficient help where he needs outside resources to accomplish the treatment. Medical knowledge must still wait for service to render it practically useful to human beings.

My own experience in family welfare work and hospital social service has shown me how sorely the people need guidance and inspiration for better health of mind and body. It has shown me, too, the deep springs of scientific knowledge ready for their use. The opportunity to bring the waters of these springs to the people craving them comes to every dispensary every day. The difficulty is that our present dispensaries, still operating on the old individualistic and charitable principles, are not prepared to take advantage of the opportunity. They must be socialized and liberated as well as scientifically equipped; laboratories, x-ray machines and all the increasingly costly paraphernalia of science will not alone prepare them.

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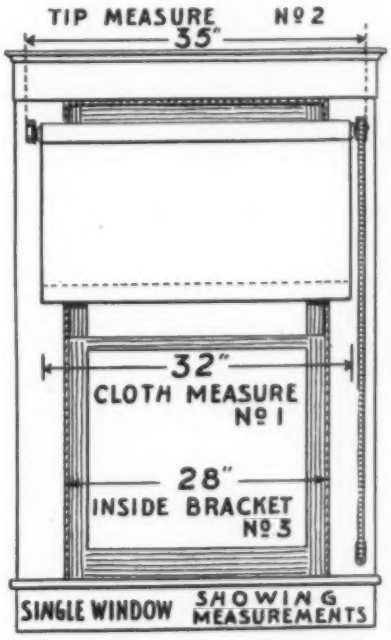

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Indeed, it appears that the health program has become too big to be charitably dispensed. Hardly have we set out upon the road before the cost has become prohibitive. Health centers like public schools may have to be developed where it will be possible for everyone who will, to learn to attain his maximum of health just as it is now possible to attain education. Some of us are born constitutionally unfit in one way or another, and may never attain high physical or mental development. Nevertheless, the assurance of opportunity for each to attain his best is, I firmly believe, a practical ideal for every community. It must not be forgotten, though, that such assurance of opportunity for attaining health means more than health centers or dispensaries. It has been demonstrated many times that good health is not long possible for people, however well instructed they be, who are bowed down by the miseries of poverty. Somehow, we must find the way to make the labor and the hire worthy of the laborer.

Are we to continue to struggle to meet the ever-increasing demands? I very much hope so in 1921, and for a few years longer. But ultimately I believe we should aim toward a more economical arrangement, which will be communistic and cooperative, rather than individualistic in its outlines. Two kinds of dispensaries will be required: One connected with the modern hospital, fitted up for all manner of difficult diagnostic service and the treatment of cases requiring bed care or costly materials and machinery (as radium, electricity, dental surgery). One hospital dispensary of this kind can serve a large population, be it crowded in one city or scattered over many square miles. Closely associated with it will be the other kind of dispensary, one for each small neighborhood, as it were. The second kind will have no wards for bed treatment and only the simplest equipment in buildings and laboratory facilities. It will specialize in service to patients; it will practice social medicine, rather than scientific research; its expenditure will be for personnel, far more than for white enamel and fine apparatus. The present experiments in health centers point very clearly, I feel, to such a division of dispensary types.

"DISPENSARY ABUSE" IN BUFFALO

"DISPENSARY ABUSE," in the sense of the use of a charitable dispensary's facilities by patients who can afford to pay a physician, has for many years been a subject of discussion and controversy, but it is seldom that so determined and sincere an attempt has been made to meet the problem, and adjust fairly the differences of opinion between the physician and the social worker, as was made at the recent meeting of the Medical Society of the County of Erie, New York, held in Buffalo. This meeting was called by Dr. Walter Goodale, director of the Department of Hospitals and Dispensaries, Buffalo, who felt, as a result of replies received from questionnaires, that the physicians of the county had too little information concerning social service work in the county.

The April number of the *Foundation Forum*, a publication conducted by the Buffalo Foundation, gives a brief report of the efforts made in Buffalo to promote better understanding of social work by the physician, and of the problems of private medical practice and fair use of medical charity, by the social worker.

The economics committee of the Medical Society of the County of Erie recently circulated a questionnaire among its eight hundred or so members, asking their frank opinion on the health center system as it is operating in Buffalo. About ninety replies were received by the committee, and these responses were in the ratio of more than two to one in favor of the health centers.

The objectors to the health center system maintained chiefly that private physicians were being deprived of a not inconsiderable portion of their legitimate practice through the abuse of the free health center and clinics by patients able to pay a private practitioner for such medical services.

The objectors further accused social workers of aiding and abetting this alleged abuse by too free recommendation of the health centers and by lax investigation of the financial condition of persons recommended to the clinics.

These accusations were of so vague a nature that no definite or specific charges could be found among them.

To bring the matter up for open discussion, Dr. Arthur G. Bennett, president of the medical society, and Dr. Walter S. Goodale, superintendent of the Department of Hospitals and Dispensaries, arranged for a meeting of the medical society at which representatives of eleven social agencies read short papers on the health center question as approached from their different angles.

At the conclusion of these papers, the question was thrown open to discussion, a number of physicians voicing their objections to health centers, the chief complaints being that social workers had here and there recommended patients to the free clinics who were able to pay a private physician for such services and that the health centers, particularly the urologic clinic and the baby clinics, were cutting into the practice and diverting fees from private physicians.

One physician rose to express the hope that the doctors might discuss health centers from a somewhat higher, broader viewpoint, and another called attention to the value of the free clinics as training places for young physicians and as places where persons could come to appreciate the value of consulting physicians rather than avoiding them until the last minute.

Following that meeting, the economics committee of the medical society and the social workers who had read papers came together for a discussion to discover if some better working basis could not be arranged, this conference being in accordance with a resolution adopted at the medical society meeting.

That conference finally narrowed down to the problem of making financial investigations of patients sent to health centers, and Dr. Abraham H. Aaron, chairman of the economics committee, said he would ask each social agency in the city and county to give him its method of making such investigations.

The discussion again centering on the Court Street urologic clinic, Dr. Frances M. Hollingshead, director of the Buffalo Foundation, consented to act with Dr. Aaron or other designated physicians in making an intensive study of several weeks' duration of a group of patients applying at the Court Street clinic, to determine, if possible, some practicable and more nearly complete method of investigating the ability of such applicants to pay for treatment.

Taking up this phase of the matter, a committee of social workers drafted a letter which was signed by the executives of the organizations concerned, and sent to the medical society's economics committee, which read as follows:

"You will remember that at a meeting held on March 21, 1921, at the University of Buffalo, during the discussion of the papers of the evening, several times the statement was made that patients had been shifted from private physicians to the health centers through the influence of social workers.

"No one of the social agencies lays any claim to a perfect system. There are a large number of field workers in the city, both paid and volunteer, and there is of course a possibility of making a slip at any time. Since the social agencies are perfectly sincere in their expressed

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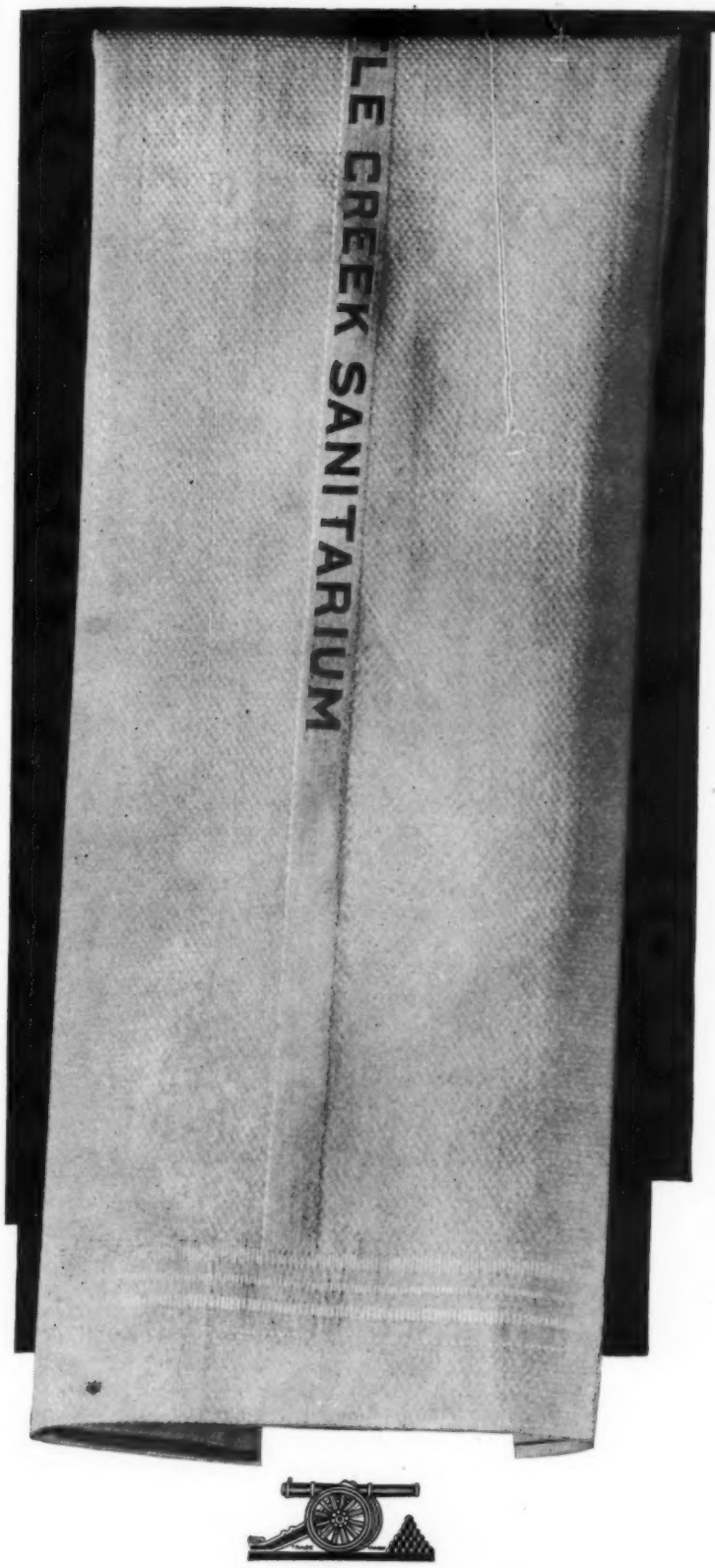

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desire to cooperate fully with the physicians, they will court any honest criticism of their workers, provided such criticism is definite and made in writing, or directly to the heads of the organization concerned, by word of mouth. Any such cases will be taken under immediate and serious consideration. It is hopeless, however, to run down vague and general statements which go through two or three persons.

"The undersigned executives respectfully request, therefore, that in the future all such criticism shall be specific, shall be preferred in writing, and referred to the joint committee of physicians and social workers for consideration and adjustment."

As the matter now stands, social workers testify that the health centers, despite some admitted faults, are doing a necessary work in this city, and they are ready at all times to investigate any specific, authoritative complaint, in which they are concerned, of free service being given to patients well able to pay.

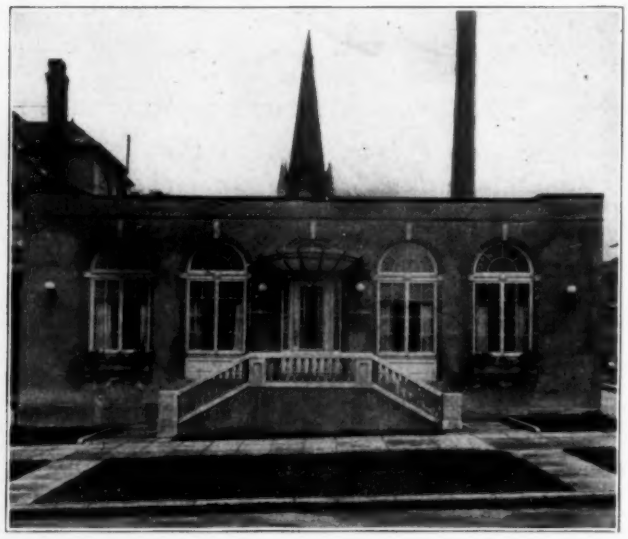
The great majority of physicians who have expressed themselves on the matter, favor the health center plan.

Those against it are not sufficiently definite in their complaints of loss of fees through the abuse of clinics.

Finally, the way is open to adjust all bona fide complaints.

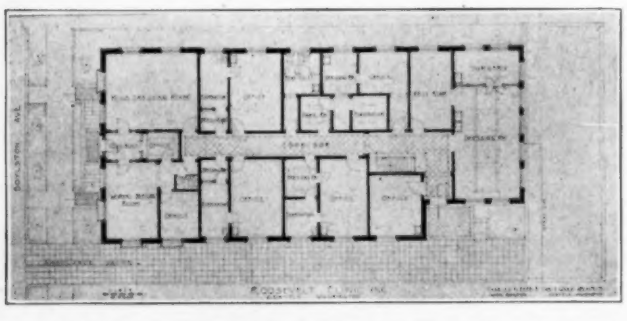
THE ROOSEVELT CLINIC IN SEATTLE

Owing to the highly specialized conditions in their practice, a group of Seattle physicians found it necessary to construct a building especially adapted to their needs. This building is one story and a basement, with garages



The Roosevelt Clinic, Seattle, Wash., where a group of doctors have their offices and recreation rooms. Bebb and Gould, Seattle, architects.

at the rear. The entrance is placed in the center, with men's and women's waiting rooms at the sides. From these waiting rooms is accessible the main corridor of the building, and upon which the various doctors' offices are



Plan of the Roosevelt Clinic, Seattle, Wash., Bebb and Gould, Seattle, architects.

located, each suite being arranged with a general consultation room, examination, and dressing room. In the rear of the building is located a general dressing room, minor surgery, and a recovery room. The building is fully equipped with a sterilizing room and an x-ray laboratory, and various other modern equipments.

The building is of the ordinary masonry type of construction, finished on the exterior with white stucco, with variegated buff brick trimmings. A very pleasing effect is obtained by a limited amount of pre-cast stone. The waiting rooms are artistically decorated, and are furnished with wicker furniture. White has been avoided throughout the interior, and every effort has been made to get away from the old type of hospital finish.

DR. ADDISON, MINISTER OF HEALTH, RESIGNS

Dr. Addison, the first minister of health of England, the office having been created in June, 1919, has resigned. The duties of the ministry have included coordinating half a dozen government departments which dealt with various phases of public health, and attacking the housing problem, which had become very acute. Before he entered politics, Dr. Addison was an anatomist at St. Bartholomew's Hospital. In his term of public work he has showed great energy and skill, and has carried out the work of reorganizing the medical service with success, but owing to the attitude of the trade unions he has not been able to make much progress in the matter of building. Dr. Addison's plans for reforms, however, made him enemies in the political field who charged him with extravagance, and organized a press campaign against him. No reason is given for Dr. Addison's resignation, but it is thought to have been due to disgust at the unjust way in which he has been criticised.

CONFERENCE OFFERS BROAD PROGRAM

The National Conference of Social Work will be held at Milwaukee, Wis., June 22-29. There will be ten divisions, so that every type of social work will be represented. Among the papers included in the program for the health division will be: "The National Health Council—Organization and Program," by Donald B. Armstrong, M.D., Framingham, Mass.; and "The National Health Council —A Council for Coordinating Child Health Activities," by Courtenay Dinwiddie, executive secretary of the Council, Washington, D. C. There will be papers on the health program of the American Red Cross, the significance of child health work, government departments in their relation to health, and other interesting topics.

The division of mental hygiene has divided its program into four divisions: mental hygiene problems of normal childhood and youth, of subnormal children, and of maladjusted children, and the educational value to the community of mental hygiene agencies.

HOSPITAL OPENS CLINIC

St. Luke's Hospital in New Bedford, Mass., opened, on May 2, a clinic and dispensary. An addition has been constructed and fitted with all modern equipment for the successful care of patients, at a cost of about $60,000. The various departments of the clinic are as follows: children, adult medical, orthopedic, nerve, throat, surgery, eye. Although it has been open only a few days, the response has already been such as to encourage the authorities of the hospital, and gives assurance that it will successfully meet a great need in this community.

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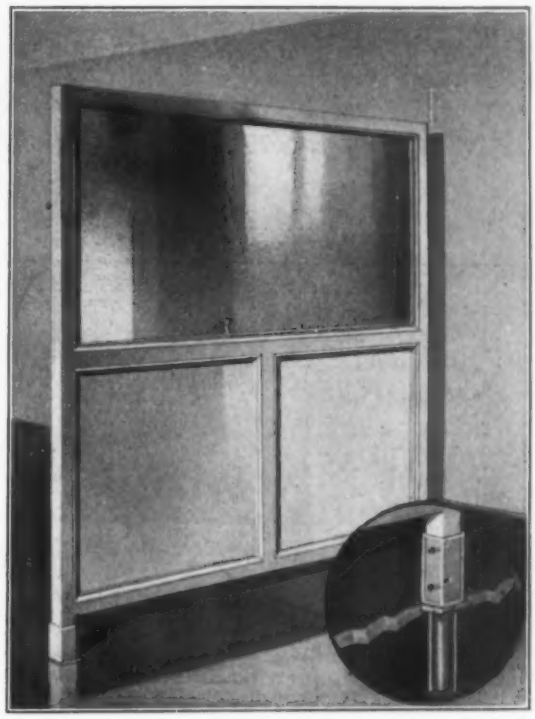

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EDUCATION OF PHYSICIAN AND PUBLIC NECESSARY TO BRING ABOUT PREVENTION OF TUBERCULOSIS

AS THE medicine of the future, to a large extent, will be that of prevention, there is no doubt that the practice of medicine will have to be revised considerably in accordance with this trend. That is not to say that curative medicine will be a thing of the past, there will always be plenty of scope for treatment of this kind, seeing that there will always be diseases which have passed the stage of prevention, or which cannot be prevented. Also preventive treatment does not mean that the majority of diseases will be prevented entirely, but rather that if diagnosed in an early stage and treated by appropriate methods they may be prevented from going further, in fact, that they may be nipped in the bud. In order to bring about this desirable state of affairs, it is essential that the medical practitioner be competent to make an accurate and early diagnosis. Sir James Mackenzie is devoting his time to this end at St. Andrews, Scotland; he is endeavoring to teach the general practitioner how to diagnose diseases in their incipient stages. The British Ministry of Health is in agreement with this point of view and is in favor of pursuing his methods on a large scale as soon as the opportunity offers. But it is not only necessary that the medical man shall be able to diagnose early symptoms promptly and accurately. The patient must come to him as soon as the early symptoms of disease appear. To induce him to do this is even more difficult than to teach the practitioner how to diagnose accurately and to estimate the importance of early symptoms. The patient, as a rule, does not go to the doctor when first feeling "out of sorts," but is liable to put off going until the disease has gained a foothold. Therefore, the public must be educated to seek medical advice at the early premonitions of sickness. To no disease, probably, do these tenets of prevention apply more aptly or with greater force than to tuberculosis, and especially to chronic pulmonary tuberculosis, otherwise known as consumption. It has been now definitely ascertained that if this form of tuberculosis be properly treated in the early stage, the spread of infection through the system may be so arrested that if a healthy life be lived, no recurrence need be feared. However, that this aim may be achieved, an early diagnosis must be made and treatment must be based on strictly scientific rational lines, that is, so far as such lines are understood up to the present time. It must be promised and insisted upon that there is no royal road to success in either the treatment or prevention of tuberculosis. For example, as pointed out by several speakers at the eighth annual conference of the National Association for the Prevention of Tuberculosis, held in Liverpool, October 7 to 9, 1920, in prevention there are many factors to consider. There is need for adequate sanitary and hygienic housing accommodation, this is an imperative, perhaps the most pressing, need. Adequate and suitable food is another outstanding factor. Diet plays a great rôle in prevention and treatment. The segregation of infectious cases, and the treatment of the sick as a means of preventing cross infection are points which must be considered and acted upon. Again, there is urgent need for a non-tuberculous milk, for while views of authorities vary as to the peril involved in milk containing the germs of tuberculosis, the majority of English speaking investigators and medical practitioners are of the opinion that tuberculous milk is a fertile source of infection so far as infants are concerned.

It must be borne in mind that although many specific remedies have been loudly heralded, at the present time a Swiss is claiming a cure for tuberculosis which is being investigated, none as yet has fulfilled expectations, and consequently, it is necessary to employ many methods of general and specific importance in prevention and treatment. Research is required. There are still many obscure points with regard to tuberculosis which can perhaps only be cleared up by laboratory investigation. While sanatorium treatment has not been the conspicuous success which its initiators prophesied for it, neither has it been the dismal failure which many of the speakers at the Liverpool conference declared that it had been. Properly carried out sanatorium treatment has its place in the treatment of tuberculosis, and of pulmonary tuberculosis in its early stages, in particular. As more than one speaker at Liverpool indicated, too much was expected of sanatoriums on account of the indiscreet laudation of the pioneers of the method. Sanatoriums were to be the means of abolishing the white plague, and when, after some years' trial, there too exuberant prophecies did not come to pass, a revulsion of feeling took place and sanatoriums were condemned as useless or worse than useless. It appears that sanatoriums are one means of treatment, and that when the cases are selected with care, and appropriate treatment is adopted, the results obtained in these institutions is satisfactory. Therefore, in spite of the fact that sanatoriums by themselves can never solve the problem of tuberculosis, on the other hand,

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it will not be a waste of money to build more sanatoriums. They are links in the chain of prevention treatment. The first and most important need in this country, according to the views of most of the speakers, is the building of decent houses throughout the land. There is as great a lack of adequate and healthy housing accommodation in the country as in the city. This is the crux of the problem. So long as there is a dearth of well ventilated and sufficiently commodious houses, so long will consumption flourish. By erecting good houses a blow is struck at the disease at its source, which is no doubt the most effective mode of prevention. Unfortunately, the Ministry of Health is greatly handicapped in its efforts to provide houses. It is difficult to induce men to work, and when they do work, their wages are so high, and the material and transport are so expensive, that the cost of building is almost prohibitive. The agricultural colony and the industrial colony are other links which have been forged but recently. They seem, as far as can be judged, to be fulfilling their purpose well. The Papworth Colony, near Cambridge, was visited by the writer at the time of the meeting of the British Medical Association in that city, and impressed him greatly. Recently a new colony has been established near Liverpool in connection with the Liverpool Sanatorium. Like Papworth Colony, it is a combination of sanatorium, agricultural, and industrial colony. Colonies for ex-service men and civilians are now being planned or are in course of development in various parts of Great Britain and in British lands overseas. Some of these are aiming mainly at training in agricultural, horticultural, and allied interests, and others are giving special attention to instructions in handicrafts. Lastly, it may be said that institutions or colonies for the segregation of those suffering from chronic pulmonary tuberculosis in an advanced stage are essential links in the chain of prevention. The consumptive in an advanced stage is a menace to the community and for the good of the race must be kept apart from his non-infected fellows.

* * * *

I said in a former part of this letter that the British are very averse to advocating the establishment of pay hospitals, or pay wards in hospitals; this is undeniably true. In all the discussions and controversies which have raged of late concerning ways and means of continuing, extending, and reforming the hospital system in Great Britain, it is but seldom indeed that a voice is raised in support of the pay system, and if so raised, it is in a timid and apologetic manner. However, Mr. Morris in finishing his argument for hospital reform says "And think how many of those precious hospital beds so invaluable for diagnosis purposes, and so much less valuable than they should be for curative purposes, would be set free by such a scheme to give help to those most unfortunate of all, the middle class to whom the hospitals' doors are officially closed and who cannot by any possibility afford what is free to the lounger at the public house door, or the hawker shouting his wares in the Mile end-road. These people, the proud and hard hit middle class, would gladly pay three or four guineas a week ($15.75 or $21.00) to have an equal chance with those others in getting well. I believe their payments would go a long way towards providing for the upkeep of these country annexes, which would not be very costly."

Also, as I think I mentioned in a previous communication, Sir George Newman, medical adviser to the Ministry of Health, in his clear and cogent "Outline of Preventive Medicine," issued recently, said tentatively in discussing the hospital situation that some patients may be able to afford to pay for treatment and this will raise the further question whether some hospital accommodation should not be available for "paying cases."

Future Hospital System

It is plain that, whether the voluntary system, or a modified voluntary system is continued, or a State Control system is inaugurated or a pay system is brought into vogue in Great Britain, the future hospital system will differ widely from the present. Certain of the existing methods of control and management are relics of the feudal age, revised in conformance with modern views. British hospitals have done and are doing splendid work; but this does not mean that their mode of working is not susceptible of vast improvement. If the future of the British hospital, and of all hospitals, lies in the preventive rather than the remedial or curative treatment of disease, then very drastic changes in the present system must be made, and a beginning should be made at once. There is a good deal of available hospital accommodation which is not put to proper use, and there is a lamentable lack of organization generally. In America, hospitals are open to all classes of the community, and the accommodation is paid for largely according to the means of the patient. It seems to be generally realized that in order to obtain the best medical and surgical treatment and nursing care a sick or injured person should go to a hospital. This view is not taken in Great Britain, or rather, if taken, cannot be carried out under existing conditions. On the other hand, it does not seem to be so thoroughly recognized in America as here that the future hospital will have more to do with the preventive treatment than with the remedial or curative treatment of disease. Each country can learn from the other with regard to the best means of evolving an ideal hospital system.

Lax Business Methods Entail Large Costs

Well known as is the lack of hospital business methods, very serious consideration ought to be given to several of the most glaring and most unscrupulous practices of modern firms dealing in hospital supplies. Padding orders by the addition of items, sending large unordered shipments and prompt billing immediately after a new superintendent has taken office, with the intent of creating the impression the order was placed by predecessor, are minor but effective ways of exploiting hospitals. Goods are often not ordered but sent with a knowledge that, at first, billing will indicate someone ordered and that before the error can be corrected articles will be separated so far that the easiest solution is to pay the bill.

All of these obvious unbusinesslike perpetrations can be remedied by the simple expedient of ordering only by written numbers and the retention of all carbon copies. Serially numbered orders are the first requirements of an established business policy, and this requirement will be respected by all business firms. The number will always appear on the invoices and the shipments. Subsequent checking of the goods received and the prices billed against the copies will eliminate every error and will often save many times the original cost. Orders should also come only from one department or person, and should be based on written requisitions.

Frequently the many duties of a hospital superintendent complicate his position as a buyer. He will, therefore, find a file of the record of purchases, made with prices for all goods not delivered, of great value, and he will appreciate the general reputation of his hospital in the business world will be enhanced by employing recognized methods.

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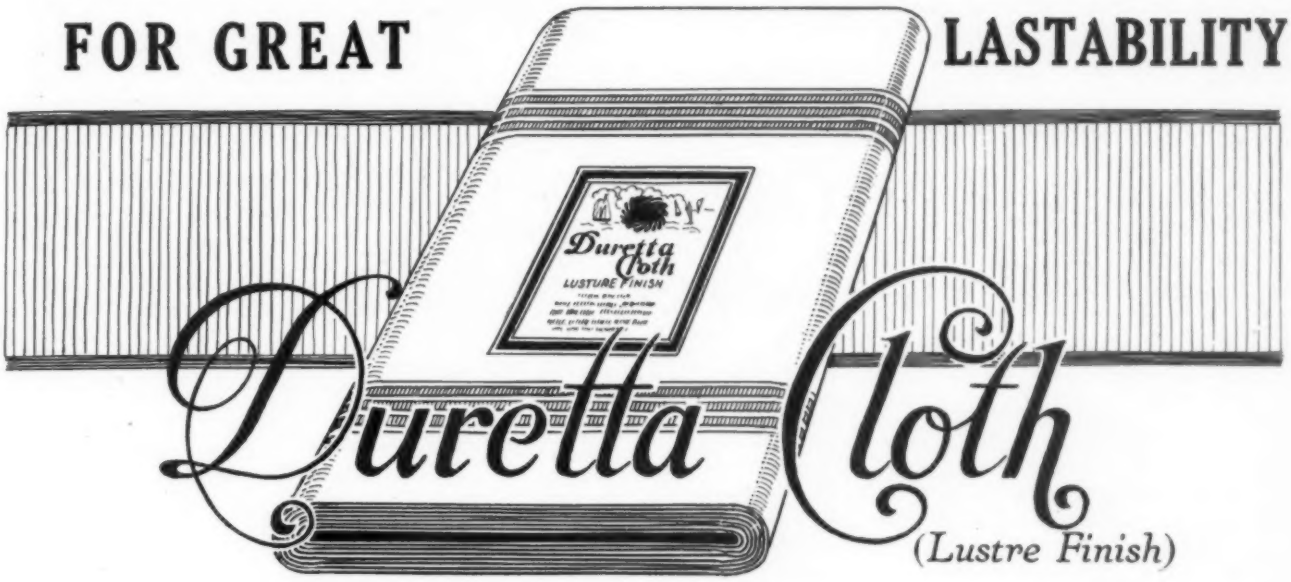
FOR GREAT LASTABILITY



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BOOK REVIEWS AND CURRENT HOSPITAL LITERATURE

CLEVELAND SURVEY COVERS INDUSTRIAL HEALTH SERVICE

By HARRY E. MOCK, M.D., Chicago, Ill.

IN UNDERTAKING to study existing measures for the safeguarding of the health of industrial workers, the survey committee of the Hospital and Health Survey of Cleveland, made at the request of the Cleveland Hospital Council, realized that detailed consideration of working conditions, of sanitation, of accident hazards, and of industrial health, was not possible in a brief survey. Inquiry by questionnaire, and by personal visit and conference, was therefore made to obtain only certain essential data regarding the medical organization which various industrial and mercantile establishments have developed for the care of the health of their employees; to estimate as accurately as might be possible, the efficiency of such organizations; and to offer an expression of opinion regarding the merits of certain features observed, and ways and means for remedying the more outstanding defects.

It was found that the quality of medical service rendered, in the establishments which have been considered as furnishing services, ranges between widely separated extremes. Apparently in only a few instances has it been found to be of a high order, judged by the best standards of industrial medicine and surgery as practiced in this country. It is creditable to note, however, that about one-half of the industrial workers of the city are, upon occasion, receiving some sort of medical attention in industrial plants besides the mere care of accidents and injuries required by the workman's compensation laws. No effort has been made by the Survey to appraise the quality of surgical work done by the industrial surgeons in the city, but there is much evidence that Cleveland is fortunate in having a group of interested, conscientious, and able surgeons giving their time especially to industrial cases. There are in Cleveland a few highly skilled industrial physicians, possessed of wide technical knowledge of their field, trained to consider the intricate interrelations of medicine and industry. As a rule, however, the men interested in industrial practice are frankly not concerned with anything except surgical conditions. The Survey recommends that industrial physicians be selected with regard to their professional and executive abilities, and that only the well qualified be chosen; that they be remunerated on a basis commensurate with the amount and character of services expected of them; that they be not permitted to combine with their official duties personal practice among the company personnel.

In regard to industrial nursing, it was found that a great many industrial nurses in Cleveland are registered, trained nurses. Some have entered this specialty because they sought the short hours and freedom of the industrial world, rather than the strain and uncertainty of private duty nursing. A small portion of industrial nurses of the city are not registered ones, and not graduates of hospital training schools.

There is, undoubtedly, a place in industrial medical service for practical nurses, and nurses' assistants, serving with or under the direction of competent medical or nursing authority. At present practical nurses are found in almost every instance, in charge of their own departments.

Not infrequently, the nurse gives far more service than is expected of her. She finds slight stimulus to better effort. If she writes a poor report, it serves as well as a good one, for it doubtless receives but a casual glance from an uninterested front office executive. Perhaps, as in one plant, she finds no official who considers it his duty to review that report, so she submits none. She may attempt to extend her usefulness, as in another Cleveland establishment, but the employees make such increased use of her department that she is retired to her own reservation and instructed to remain there. If the professional advice she offers is unsound, there is no one the wiser, certainly not the recipient of the advice.

Attention is also called to the practice of indiscriminate medication by nurses in certain industries, which are without medical supervision, which is not in accordance with modern standards of medical treatment, and is furthermore in direct violation of the Medical Practice Act of the State of Ohio. The Survey suggests that there is urgent need in Cleveland, as in other cities, for some means of carrying to the industrial nurses, the counsel and technical assistance which most need and many desire. The present Industrial Nurses' Club is presumably of real value in this connection, but its services are quite inadequate.

It is difficult to determine the exact number of firms whose nurses make visits to the homes of employees, but in only a small number of establishments is visiting nursing an accepted part of the medical department routine. Industry has occasionally made use of the Visiting Nurses' Association. A more extended utilization of such an established service might be advantageous. The Survey points out that certain types of visiting nursing are frequently a transparent subterfuge of employment departments to mask the real purpose of the visiting, and such service rarely fails to discredit the organization responsible for the activity, and to lower the respect of employees for the plant medical service. With good reason, employees resent the coming to their homes unasked, of women who wear uniforms of nurses, but who in purpose and in fact are employed by the company for espionage and not for health department work.

The suggestion is made that the standards employed by the Bureau of Labor Statistics of the U. S. Department of Labor are authoritative in regard to statistics on accident frequency.

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